



THE Business History REVIEW

JACK BLICKSILVER

George Gunton: Pioneer Spokesman for a Labor-Big
Business Entente 1

MILTON J. NADWORNY

Frederick Taylor and Frank Gilbreth: Competition
in Scientific Management 23

FRITZ REDLICH

Academic Education for Business: Its Development
and the Contribution of Ignas Jastrow (1856-1937)
In Commemoration of the Hundredth Anniversary
of Jastrow's Birth 35

CHARLES J. KENNEDY

The Eastern Rail-road Company to 1855 92

PUBLICATIONS NOTE

141

Book Reviews

ARE LISTED IN THE TABLE OF CONTENTS



The BUSINESS HISTORY REVIEW

PUBLISHED QUARTERLY BY THE HARVARD GRADUATE SCHOOL
OF BUSINESS ADMINISTRATION

VOL. XXXI, NO. 1 - SPRING, 1957

EDITORIAL BOARD

EDWARD C. BURSK HARVARD UNIVERSITY

ALFRED D. CHANDLER, JR. MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DONALD T. CLARK HARVARD UNIVERSITY

JOHN B. RAE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

GEORGE ALBERT SMITH, JR. HARVARD UNIVERSITY

Editor: GEORGE S. GIBB HARVARD UNIVERSITY

Editorial Assistant: HILMA B. HOLTON

The BUSINESS HISTORY REVIEW is published in the Spring, Summer, Fall, and Winter. Address all communications, including manuscripts and change of address, to Business History Review, 217 Baker Library, Soldiers Field, Boston 63, Massachusetts. Telephone KIrklan 7-9800.

Regular subscription rate \$10 per year. Special rate for teachers and students \$5 per year. Single copies and reprints of most articles are available; information on request.

The BUSINESS HISTORY REVIEW does not assume responsibility for statements of fact or opinions made by its contributors.

Entered as second-class matter at Boston, Massachusetts. Printed at the Harvard University Printing Office.

Copyright, 1957, by the President and Fellows of Harvard College

CONTENTS

JACK BLICKSILVER

George Gunton: Pioneer Spokesman for a Labor-Big Business Entente 1

MILTON J. NADWORNY

Frederick Taylor and Frank Gilbreth: Competition in Scientific Management 23

FRITZ REDLICH

Academic Education for Business: Its Development and the Contribution of Ignaz Jastrow (1856-1937)
In Commemoration of the Hundredth Anniversary of Jastrow's Birth 35

CHARLES J. KENNEDY

The Eastern Rail-road Company to 1855 92

PUBLICATIONS NOTE 141

Book Reviews

Kendall Beaton, *Enterprise in Oil: A History of Shell in the United States*. Reviewed by Elizabeth Bricker Currier 125

Harold Mansfield, *Vision: A Saga of the Sky*. Reviewed by Merrill J. Roberts 127

H. Minar Shoebottom, *Anaconda: Life of Marcus Daly, The Copper King*. Reviewed by Kenneth H. Myers 128

Harold Koontz and Richard W. Gable, *Public Control of Economic Enterprise*. Reviewed by Harris Proschansky 130

Philip L. White, *The Beekmans of New York in Politics and Commerce, 1647-1877. The Beekman Mercantile Papers, 1746-1799*. Reviewed by Lawrence H. Leder and Vincent P. Carosso 132

George Rogers Taylor and Irene D. Neu, *The American Railroad Network, 1861-1890*. Reviewed by William T. Doher-ty, Jr. 135

Blake McKelvey, *Rochester - The Quest for Quality, 1890-1925*. Reviewed by Wayne G. Broehl, Jr. 136

Alfred D. Chandler, Jr., *Henry Varnum Poor, Business Editor, Analyst, and Reformer*. Reviewed by William Miller 138

By Jack Bicksilver

ASSISTANT PROFESSOR OF ECONOMIC HISTORY
AT GEORGIA STATE COLLEGE

George Gunton: Pioneer Spokesman for a Labor-Big Business Entente

The story of George Gunton is that of an astonishingly accurate economic prophet whose viewpoints have found wide acceptance a half-century after they were enunciated. Gunton is shown in this article not as a paid defender of big business but as an apostle of compromise, standing in the No Man's Land of a vast battleground. With equal fervor Gunton declared, "It is our industries that make us great," but that laborers' wages were "as elastic as human wants . . . capable of as much expansion as the social character of man." His numerous commentaries are a lucid clue to the relative importance of contemporary issues, and those commentaries are enhanced by Gunton's instinctive sense of history. Out of the confusion of contradictory evidence recorded at the Chicago Conference on Trusts, before the Industrial Commission, and elsewhere on the business and political stage Gunton framed his thesis of the essential interdependence of big business and organized labor. His convictions were, in total, unique, and his judgment and reconciliation of conflicting viewpoints have meaning and utility today.

In 1897 George Gunton stated clearly and concisely his economic philosophy, a set of principles to which he adhered consistently during his active career as journalist and educator from 1885 to 1904. *Gunton's Magazine*, he proclaimed, was the organ of no single group, class, or party. Rather, it was the advocate of a coherent body of doctrine which recognized "alike the economic importance of concentrated capital and of highly organized labor . . . [and] the importance of legislative aid to economic and social forces that make for the development of industry and the social improvement of the masses."¹

In an era when the champions of labor and the spokesmen for big business were seldom on speaking terms, Gunton's position was somewhat unique. It should not be surprising, therefore, that he

¹ George Gunton, "Position of Gunton's Magazine," *Gunton's Magazine*, XIII (Nov., 1897), 363.

has been misunderstood and mislabeled both by contemporaries and also by some recent students of the late nineteenth century. He has been pictured, at one extreme, as a humanitarian reformer deserving classification with Henry George and Jane Addams, and at the other, as a paid publicist for the most execrated of the "robber barons."² Both portraits, of course, are distorted.

The distortion, however, is understandable. Here was a man who crossed swords with both Herbert Spencer and Henry D. Lloyd, who was a persistent advocate of collective bargaining and a reduced working day but criticized the closed shop and the "clannish trades union mind," who was unsparing in his denunciation of Andrew Carnegie as the "real sinner" in the Homestead strike yet complimented the steelmaker on his unprecedented profits in 1900. The key to Gunton, nonetheless, is not his apparent opportunism but rather his optimistic materialism, his profound conviction that the future of America rested with big business and organized labor. He devoted two decades to championing their individual triumphs and mutual reconciliation.

GUNTON'S CAREER

He began as a spokesman for the workingman, an orientation conditioned by heritage and early environment. Born in Cambridgeshire, England, in 1845, son of a humble agricultural laborer, and able to enjoy but little opportunity for formal education, Gunton early entered the textile mills of Lancashire where he participated in union activities. After a decade of hard work with little to show for it, Gunton decided to migrate to America. Leaving his family scattered among relatives, he arrived, virtually penniless, in November of 1874. Despite the serious depression then prevailing in the

² For divergent views held by contemporaries see *Social Economist*, II (May, 1892), 414-21, 425-28; clippings in Edwin R. A. Seligman, *Scrapbook*, I (1886-1897) at Columbia University; John Hobson to Henry D. Lloyd, Jan. 8, 1896, Lloyd Papers, State Historical Society, Madison; Carroll D. Wright, testimony, United States Industrial Commission, *Report . . . on the Relations and Conditions of Capital and Labor* (Washington, 1901), VII, 25. Of recent writers critical of Gunton see John T. Flynn, *God's Gold* (New York, 1932), 329; Chester M. Destler, "The Opposition of American Businessmen to Social Control During the 'Gilded Age,'" *Mississippi Valley Historical Review*, XXXIX (March, 1953), 652, 657; Hans B. Thorelli, *The Federal Antitrust Policy* (Baltimore, 1955), 330. For more favorable views see Sidney Fine, "Laissez Faire and the General-Welfare State in American Thought, 1865-1901" (Ph.D. dissertation, University of Michigan, 1948), 517. (This reference to Gunton is not included in the recent published version.) See also Ralph W. and Muriel E. Hidy, *Pioneering in Big Business, 1882-1911* (New York, 1955), 660, 744.

United States, Gunton found employment as a weaver in Fall River, Massachusetts, and soon became a familiar figure in the strife-ridden mill towns of the Bay State. Within a year he was named secretary of an amalgamated union formed in Fall River, became an organizer for the United States Cotton Operatives Association and started writing labor articles under an assumed name. He was in the forefront of the bitter industrial conflict that broke out in Fall River in 1875, and when the strike was broken Gunton was blacklisted.³

By then, however, he had attracted the attention of influential labor leaders in New England, particularly George McNeill and Ira Steward — pioneers in the short hours movement.⁴ Through their intercession Gunton found work at the customs house and later at the Navy Yard in Boston. He continued to write for labor journals and was one of the pioneer organizers of the International Labor Union. During the depression years of the 1870's his inflammatory oratory and organizational talents were widely employed throughout New England as he led mass demonstrations against wage reductions and strove to organize the craft workers into one horizontal union.⁵ Gunton also ventured into politics, first to lobby for an amendment to strengthen the Massachusetts Ten Hour Law and then in 1880 to campaign for the Massachusetts Legislature as an avowed labor candidate.⁶ Although defeated, he remained active in the labor movement as corresponding secretary of the National Ten Hour League and as associate editor of the Fall River *Labor Standard* from 1878 to 1882. After the *Labor Standard* ceased publication in 1882, Gunton was asked to edit the notes left by Ira

³ The best summary of Gunton's career is found in Davis R. Dewey, "George Gunton," in Allen Johnson and others, eds., *Dictionary of American Biography* (New York, 1928-1944), VIII, 55-56; see also *National Cyclopaedia of American Biography* (New York, 1891-1955), X, 146-47 and *New York Times*, Sept. 13, 1919.

⁴ George Gunton, *Wealth and Progress. A Critical Examination of the Labor Problem* (New York, 1887), v-vi; cf. Joseph Dorfman, *The Economic Mind in American Civilization, 1607-1918* (New York, 1946-1949), II, 980, III, 27-28, 47.

⁵ *Labor Standard*, Feb. 24, Aug. 26, 1877, Jan. 27, 1878; Rowland T. Berthoff, *British Immigrants in Industrial America, 1790-1950* (Cambridge, 1953), 97; John R. Commons and others, *History of Labour in the United States* (New York, 1918-1935), II, 301-6.

⁶ As candidate for the seat of the Eighth Representative District, Bristol County, Gunton was endorsed by the Greenback Labor Party. His platform included demands for higher fines for violators of the Massachusetts Ten Hour Law, making employers responsible for injuries on unprotected machines, ending the truck system and abolishing the poll tax. *Labor Standard*, Sept. 11, Oct. 30, 1880.

Steward at his death. Severing his official ties with organized labor, Gunton moved to New York in 1885 and entered upon a new career as independent journalist and educator.⁷

In New York in the mid-1880's Gunton was taken under the wing of a group of reformist, socially inclined educators and clergymen. Parke Godwin and Nicholas Murray Butler encouraged him to remain steadfast in his pursuit of a career in popularizing the study of economics among the masses. Edwin R. A. Seligman helped to induct him into the fledgling American Economic Association and subsidized him while he completed his first book.⁸ But the most helpful of Gunton's New York friends was the Reverend R. Heber Newton, Episcopal minister of All Souls' Church. Long concerned with civic and labor problems, an early leader in the Social Gospel Movement, Newton in the winter of 1886 organized in the basement of his church a class in social economics, designed to establish "as part of the Church work some center for the discussion of our Social Problems."⁹ Gunton was asked to teach the class and did so for five years.

This opportunity served as a springboard for Gunton's subsequent career. It afforded him sufficient time and security to complete the writings which were to accord him a measure of recognition and draw the attention of those who were to finance the enlarged scope of his activities. Published in 1887, Gunton's *Wealth and Progress* derived its inspiration and central theme from Ira Steward but was original in development and presentation. It offered considerable historical evidence to buttress the author's major thesis that a highly developed economy depended upon mass consumption which could

⁷ He continued, however, to support actively the eight-hour day and for a "nominal honorarium" wrote a widely circulated pamphlet, *The Economic and Social Importance of the Eight-Hour Movement*, for the American Federation of Labor in 1889. See Samuel Compers, *Seventy Years of Life and Labor* (New York, 1925), I, 294, 298 and Sidney Fine, "The Eight-Hour Day Movement in the United States, 1888-1891," *Mississippi Valley Historical Review*, XL (Dec., 1953), 445. In 1903 Gunton accepted a request of the striking boilermakers in the Bayonne plant of Standard Oil of New Jersey to intervene with the company on their behalf. Gunton strongly urged Standard Oil to grant recognition of the union. Hidy and Hidy, *Pioneering in Big Business*, 600.

⁸ See reminiscences in George Gunton, "A Decade of Progress in Public Opinion," *Lecture Bulletin of the Institute of Social Economics*, V (March 1, 1902), 296 (hereafter cited as *Lecture Bulletin*); George Gunton to Edwin R. A. Seligman, Dec. 8, 1886, Seligman Papers, Columbia University; Edwin R. A. Seligman, review of *Wealth and Progress*, *Political Science Quarterly*, II (Dec., 1887), 696-99.

⁹ R. Heber Newton to Richard T. Ely, Nov. 21, 1891, Ely Papers, Wisconsin State Historical Society, Madison.

best be obtained by a reduction of the working day.¹⁰ The book was followed by a series of editorials for the *New York Commercial Bulletin* which were republished in a somewhat revised version in the *Political Science Quarterly* under the title "The Economic and Social Aspects of Trusts." This constituted Gunton's first elaborate defense of big business as a boon to mankind as well as being advantageous to the workingman. It led directly to increased financial support as officials of the Standard Oil Company purchased for distribution one thousand copies of Gunton's article and the following year asked him to appear in a public debate with Washington Gladden to answer attacks leveled against the company by the outspoken Cleveland clergyman.¹¹ Soon after, Standard Oil commenced subsidizing Gunton's educational work.¹²

With a background of considerable teaching experience and the promise of increased financial support, Gunton was ready to strike out on his own. In January of 1891 the Institute of Social Economics was opened in a building on East 23rd Street, its work consisting primarily of evening class instruction in social economics, history and government. Day sessions were soon added and the curriculum enlarged to include business subjects. Liberally endowed, the school charged the modest tuition of \$100 a year for a course of study which required one year in the day school or two in the evening.¹³ With the rapid expansion of the school, Gunton leased space in a six-story building at the corner of Union Square and 16th Street during the winter of 1891 and moved again in 1897

¹⁰ Gunton, *Wealth and Progress*, vi.

¹¹ Jeremiah W. Jenks to Henry D. Lloyd, Nov. 20, 1895, Lloyd Papers; "Two Views of Trusts," *Bradstreet's* Aug. 31, 1889), 551; Allan Nevins, *John D. Rockefeller* (New York, 1940), II, 141.

¹² This financial assistance, which amounted to as much as \$15,000 annually, lasted until 1904. John D. Archbold to George Gunton, Sept. 28, 1899, in Anonymous, "Standard Oil and its Hirelings of the Press," *Hearst's Magazine*, XXIV (July, 1913), 26-27; Mrs. Amelia Gunton to Edwin R. A. Seligman, Dec. 24, 1905, Seligman Papers; Hidy and Hidy, *Pioneering in Big Business*, 660.

¹³ Aside from Standard Oil, the sources of financial support for the school are uncertain. A news item implied that "several gentlemen" who were acquainted with Gunton's lecture work connected with Newton's church contributed to the Institute. It is suggestive that among the later Counselors of the Institute were such men of wealth as Joseph A. Hendrix, president of the National Union Bank, William F. Draper, New England industrialist, Alfred Dolge, manufacturer from upper New York State, and Edwin Seligman. See *New York Times*, Jan. 17, 1892; *Social Economist*, I (July, 1891), 325-28; "Gunton Institute Announcement, 1898-99," *Gunton's Magazine*, XV (Sept., 1898), 225-26.

into a ten-story structure at 17th Street and Broadway. By the turn of the century Gunton was in charge of the evening program of the Institute,¹⁴ offered a weekly free lecture on social economics at Carnegie Hall, was editor of the *Social Economist* (which began publication in March, 1891, and was renamed *Gunton's Magazine* in January, 1896), developed a popular two-year home study program and supervised numerous local study clubs throughout the country.

During the bitter depression years of the 1890's Gunton emerged as an influential exponent of big business and organized labor. As the Institute expanded its enrollment and his monthly journal gained a nation-wide circulation, with 20,000 subscribers in 1902, he was able to reach a wide and diverse audience.¹⁵ From 1899 until 1904 Gunton's influence was further extended through his activities as director of the economic and sociological work of the Y.M.C.A. His textbook *Outlines of Social Economics* and study guides became standard for Y.M.C.A. courses throughout the country as well as for the classes and study clubs associated with the Institute.¹⁶ A staunch Republican, Gunton became an adviser to Governor Theodore Roosevelt on appointments and labor legislation.¹⁷ Between the mid-1880's and 1904,¹⁸ the crucial years during which big business ensconced itself and labor organized to meet the challenge, Gunton wielded his prolific pen and extensively employed the lecture platform to make the public more receptive to their emergence and to prepare both management and the worker for their future roles in American industrial society.

LABOR'S RIGHTS AND POTENTIALITIES

In an era when the mass of middle-class Americans looked askance at labor's demands and recoiled at the hint of violence, Gunton consistently championed the social and economic objectives

¹⁴ Principal of the Business College was John Halley Clark, A.M., former superintendent of the Flushing, New York, public schools.

¹⁵ A sampling of those who directed questions to the editor of the journal indicates that the periodical circulated throughout the country, although a majority of the readers seemed to be in urban centers east of the Mississippi.

¹⁶ *Lecture Bulletin*, IV (Nov. 15, 1900), 49; *ibid.*, IV (Jan. 15, 1901), 99.

¹⁷ Early in Roosevelt's presidential administration, Gunton broke with him on the tariff and trust issues. See Elting E. Morison and others, eds., *The Letters of Theodore Roosevelt* (Cambridge, 1951-1954), II, 10, 18, 31, 959-61, 974, 1083, 1139-40, 1325, III, 483, and Howard L. Hurwitz, *Theodore Roosevelt and Labor in New York State, 1880-1900* (New York, 1943), 216-17, 259.

¹⁸ In 1904 Gunton closed the Institute, ceased publication of his journal and went into semiretirement. He taught economics at Columbia University for

of the workers and defended labor's use of its traditional weapons. The range of reforms sought by Gunton and his willingness to employ the power of the state to secure them are most clearly seen in the labor planks he prepared for the Republican National Convention of 1900: labor was to be placed on an equal plane with capital and was to enjoy similar legal rights; the hours of labor throughout the country were to be gradually reduced; sweatshops were to be suppressed, the minimum age for child labor raised and educational opportunities for working children increased; an adequate system of unemployment and old-age insurance was to be put into effect; competition of contract and convict labor should be effectively limited; and unrestricted immigration of the "pauperized peasantry of the Old World" should be ended.¹⁹

Gunton was convinced that a reduction of the hours of labor was the "indispensable *first step*" in bettering the conditions of the workingman. He maintained that the passage of a national eight-hour law would inevitably eliminate involuntary idleness and raise the standard of living of the workers. This would occur as the employee, with additional leisure time and less exhausted at the end of his working day, would be prepared to participate more actively in varied social activities and thereby develop new tastes and desires.²⁰

Although national legislation would be essential in obtaining fewer hours and improved working conditions, the major advances would have to be won on the industrial front. Unions, therefore, were indispensable. Without them the individual worker was isolated. "His right to ask for more pay, shorter hours, better conditions, in fact for anything which would be at first an inconvenient demand upon the employing class, could easily be suppressed if there were not group-force organized behind it."²¹ Gunton contended that

a short while but spent most of the years until his death in 1919 living quietly in Virginia.

¹⁹ Morison, ed., *The Letters of Theodore Roosevelt*, II, 1325. See also Gunton, *Wealth and Progress*, 240, 375; George Gunton, "Extension of the Public School System," *Social Economist*, III (Sept., 1892), 159-62; George Gunton, "Our American Proletariat," *Gunton's Magazine*, X (May, 1896), 356-60; George Gunton, "Menace of Immigration," *ibid.*, XVI (March, 1899), 166-70.

²⁰ Gunton, *Wealth and Progress*, 234, 260; George Gunton, "Shall an Eight-Hour System be Adopted?" *Forum*, I (April, 1886), 136-48; George Gunton, "Feasibility of an Eight Hour Work-Day," *American Federationist*, I (July, 1894), 91-92.

²¹ George Gunton, "Economics of Strikes and Boycotts," *Social Economist*, IV (May, 1893), 257-66; George Gunton "Liberty and License," *Lecture Bulletin*, III (Dec. 9, 1899), 248-47.

an insistence upon freedom of contract for the worker under conditions of an impersonal factory system was the "height of absurdity." Rather than being a bargaining session between equals it would simply permit the employer to "take the laborers singly in order to make them jointly accept his terms."²²

Although he conceded that once the union became strongly entrenched it might act in an overbearing and despotic manner, Gunton urged that the labor movement be judged on its over-all effect rather than on its mistakes and weaknesses. "Would anyone venture to say," he queried, "that . . . because there are dishonest and incompetent deacons and ministers church associations should disband? . . . Considering their limited opportunities and the extent of the forces arrayed against them, the wonder is not that the laborers have made so many mistakes, but rather that they have succeeded at all."²³

To aid labor in its struggle for equal rights, Gunton demanded that unions be accorded a legal status by incorporation. Although unions would then be held responsible for the fulfillment of their contracts and industrial conflicts would be restricted to the original disputants, workers would be legally entitled to strike, boycott, and picket. Management, on the other hand, would be held strictly accountable for the maintenance of their contracts with their employees. Gunton approved legislation making it a misdemeanor for management to refuse to engage in collective bargaining or to discharge workers because of union membership.²⁴

Unions should reciprocate, however, by serving as a conservative buffer against the radicalism of the discontented few. They were to adhere religiously to the terms of their contracts, co-operate with the employer to see that he received a fair day's work for his wages, assure the economical use of materials and combat the "socialistic" doctrine that labor was the creator of all wealth.²⁵ Accordingly, al-

²² George Gunton, *Principles of Social Economics, Inductively Considered and Practically Applied* (New York, 1891), 421-23; George Gunton, "The Carnegie Conflict," *Social Economist*, III (Aug., 1892), 115; Gunton, "Economics of Strikes and Boycotts," *ibid.*, IV (May, 1893), 262-63.

²³ Gunton, *Principles of Social Economics*, 432; George Gunton, "American Social Problems," *Lecture Bulletin*, III (Oct. 7, 1899), 16.

²⁴ Gunton, "Economics of Strikes and Boycotts," *Social Economist*, IV (May, 1893), 263-65; George Gunton, "Society and Sympathetic Strikes," *ibid.*, VII (Nov., 1894), 262-68; George Gunton, "Liberty and the Boycott," *Lecture Bulletin*, III (Nov. 11, 1899), 135-43.

²⁵ Gunton, *Wealth and Progress*, 12; George Gunton, "Large Corporations and Labor Unions," *Lecture Bulletin*, IV (June 15, 1901), 219, 225; George Gunton, "Union vs. Open Shop," *Gunton's Magazine*, XXV (Aug., 1903), 108.

though he declined to regard the Knights of Labor and the American Railway Union as "bona fide labor organizations," Gunton placed his stamp of approval on the business unionism of the American Federation of Labor and complimented Gompers for his program of improving the conditions of the worker on the job while avoiding the pitfalls of political affiliation and the "quicksands of socialism."²⁶

Gunton voiced his staunch support of labor's efforts to improve its position against an indifferent public, an often hostile judiciary, and the organized opposition of some businessmen. He was vitriolic in his denunciation of such middle-class exponents of laissez faire as Edward Atkinson and David Ames Wells whose solicitude for the personal freedom of the worker to bargain individually with his employer smacked, Gunton thought, of the "worst kind of economic hypocrisy."²⁷ He was also critical of the courts for their frequent issuance of injunctions, a practice which he called a serious menace not only to organized labor but to personal liberty as well.²⁸ Finally, he condemned for their "short-sighted perversity" such powerful employer organizations as the National Manufacturers Association and the National Metal Trades Association, which were chastized for their connivance with the press and the courts to destroy unions and wipe out labor's gains.²⁹ When a contributor to his journal denounced unions and urged employers to resist the pressure for union recognition, Gunton took strong issue, asserting that "They are the best means ever discovered and almost the only means by which a rise of wages and shortening of hours can be secured, both of which are indispensable conditions of the advance of civilization."³⁰

²⁶ "Editorial Crucible," *Social Economist*, VIII (Jan., 1895), 44; "Editorial Crucible," *Gunton's Magazine*, X (Jan., 1896), 66; "Editorial Crucible," *ibid.*, XIII (July, 1897), 65-67; George Gunton, "The A.F. of L.," *ibid.*, X (Feb., 1896), 134-37.

²⁷ Gunton, *Principles of Social Economics*, 393; "Editorial Crucible," *Gunton's Magazine*, XII (June, 1897), 430-31.

²⁸ George Gunton, "Economics in the Magazines," *Gunton's Magazine*, XII (Jan., 1897), 64; George Gunton, "Government by Injunction," *ibid.*, XI (Oct., 1896), 242-48; George Gunton, "Misuse of Injunctions," *ibid.*, XXIII (Sept., 1902), 226-33.

²⁹ Gunton, "Economics of Strikes and Boycotts," *Social Economist*, IV (May, 1893), 258; George Gunton, "Labor and Capital," *Lecture Bulletin*, V (Feb. 1, 1902), 260; George Gunton, "The Misuse of Organization," *Gunton's Magazine*, XXIV (June, 1903), 471-80.

³⁰ H. F. Henry, Jr., "Rights of Employers," *Social Economist*, III (Oct., 1892), 193-98, and Gunton's reply, *ibid.*, 198-99.

In specific tests of strength between labor and management, Gunton invariably sided with the strikers. In the anthracite coal dispute of 1902, he condemned the owners for determining wages without consulting the workers, "much as an army general would issue an order, the czar a ukase, or the pope a bull." He never forgave Andrew Carnegie for precipitating the strike at Homestead, contending that all the benefactions of the industrialist could never "even dim the crimson hue" of that "crime against labor and society."³¹

"If I could I would write it on the sky," Gunton wrote in 1901, "that highly-paid labor is indispensable to any considerable national progress. . . ." ³² He deplored the shortsightedness of those who regarded the worker solely as a factor in production while ignoring his role as the nation's largest consumer. But although it was essential that labor secure a steadily increasing share of the total national wealth, this must not be achieved suddenly or through "arbitrary" action. Rather, it must be preceded by an enhanced capacity to consume, a condition induced by the development of new tastes and desires. The increasing complexity of the social character of the worker would take place gradually with increased leisure and the normal impulse to emulate the consumption patterns of the more wealthy. The chief influence determining the rate of wages, therefore, was the standard of living of the most expensive families furnishing a necessary part of the labor force. It was the habitual standard of this minority which determined the general wage rates for the great majority.³³

Gunton, therefore, rejected the concept of a "wages-fund" upon which labor was forced to depend, insisting rather, with Francis A. Walker, that wages were derived from current production and prospective profits. Far from being rigidly fixed, wages were "as elastic as human wants and desires, and capable of as much expansion as the social character of man."³⁴

³¹ Gunton, "The Carnegie Conflict," *ibid.*, III (Aug., 1892), 112-15; George Gunton, "Coal Strike and the Public," *Gunton's Magazine*, XXIII (July, 1902), 23-27; Gunton, "A Decade of Progress in Public Opinion," *Lecture Bulletin*, V (March 1, 1902), 303.

³² George Gunton, "Are Trade Unions a Menace to Industry?" *Lecture Bulletin*, IV (Aug. 15, 1901), 273-74.

³³ Gunton, *Wealth and Progress*, 87-92, 234, 245, 280; George Gunton, "Trusts, and How to Deal with Them," *Chautauquan*, X (March, 1890), 700; George Gunton, "An Industrial Crisis," *Gunton's Magazine*, X (May, 1896), 348-49.

³⁴ Gunton, *Wealth and Progress*, 35-58, 90; Gunton, *Principles of Social Economics*, 391-92.

Furthermore, since the working class constituted the largest single force in the market place and the prospective purchases of consumers shaped production policies, mass consumption inevitably preceded mass production and made large-scale enterprise feasible. Gunton ridiculed the contention of employers that the substitution of machinery for hand labor was due to their "self-denial and sagacity." Obviously, the successful employment of capital ultimately rested upon the increasing capacity of the masses to consume, which in turn depended upon a continual rise of real wages. Thus, it was through the pressure of high-priced labor on the one hand and glowing prospects for an expanding market on the other that the employer was persuaded to adopt the latest machinery. Only in this way could increased production take place and higher wages be given while the same or an even greater aggregate profit be assured.³⁵

There existed, therefore, an essential harmony of interest between the capitalist and the proletariat. The dictates of sound economics made it senseless for employers to oppose high wages since they invariably received a greater aggregate profit from producing for a mass market. Conversely, workers should welcome the growth of big business since they benefited both as employees and consumers. Gunton concurred completely with such optimistic economists as Henry C. Carey and Frédéric Bastiat that as massed capital was employed, wage earners would obtain a steadily increasing proportion of the wealth produced.³⁶

BIG BUSINESS AND THE PURSUIT OF WEALTH

As Gunton developed his theme of the mutual interdependence of big business and organized labor, he emphasized the specific advantages of being employed by large corporations. Workingmen, of course, were concerned primarily with obtaining good wages, a shorter working day, steady employment and security against the hazards of injury and the inevitability of old age. Gunton averred that those employed by large concerns enjoyed uniformly better conditions. Since labor costs were reduced through the utilization of modern machinery, large corporations could afford to pay higher wages than their small-scale competitors. Furthermore, perceiving

³⁵ Gunton, *Wealth and Progress*, 24-30, 264; Gunton, *Principles of Social Economics*, 143-49, 190-217.

³⁶ Gunton, *Wealth and Progress*, 22, 229, 270-71; George Gunton, "Henry George's Economic Heresies," *Forum*, III (March, 1887), 15-28; Gunton, *Principles of Social Economics*, 262, 278, 279.

the difficulties involved in dealing with each worker individually and finding "integrity and good-will among the laborers . . . a more and more important factor," big business was becoming increasingly receptive to union recognition and collective bargaining. Although he conceded that no class of employers had been very generous concerning a reduction of hours, Gunton maintained that in regard to regularity of employment, the larger concerns — better prepared to adjust production to anticipated demand — offered greater permanence, fewer seasonal layoffs, and more uniform hours. With their heavy fixed capital investments, the giant consolidation would certainly be most reluctant to bank their furnaces. In the matter of security, Gunton could point to the leadership of such large corporations as Standard Oil, Pillsbury Mills, and the Baltimore & Ohio Railroad in establishing old-age pension programs.³⁷

Gunton also replied to the charge that the trusts were restricting individual opportunities and were preventing the able and ambitious from advancing rapidly up the ladder of success. Although he frankly confessed that as the American economy matured the unlimited opportunities associated with a virgin continent would decline in number, Gunton pointed out that a growing number of professions and service trades would always remain individualistic. Even more significant were the many lucrative positions within the ranks of large corporations which were becoming increasingly available to those of talent and ambition. Although a decreasing number of individuals would be self-employed, this was not necessarily a harmful development. What mattered was not for whom one worked but the amount of money received. Even if a measure of personal economic freedom was lost as a result of changes in the organization of production, it was "made up for, tenfold, in the increased material comfort, freedom, and intelligence of the social man."³⁸

Nor did Gunton fear the consequences of the routinization of tasks. Far from agreeing with De Tocqueville that the worker would

³⁷ Gunton, *Principles of Social Economics*, 13-14; George Gunton, "Large Aggregations of Capital," *Gunton's Magazine*, XII (May, 1897), 334-41; George Gunton, "The Public and the Trusts," *Chicago Conference on Trusts* (Chicago, 1900), 276-85; George Gunton, "Large Corporations and Labor Unions," *Lecture Bulletin*, IV (June 15, 1901), 204-16; George Gunton, "Are 'Trusts' an Enemy of Labor?" *ibid.*, VI (Jan. 15, 1903), 168-77.

³⁸ Gunton, "Trusts, and How to Deal with Them," *Chautauquan*, X (March, 1890), 699; George Gunton, "Economics in the Magazines," *Gunton's Magazine*, XII (April, 1897), 287; George Gunton, "Opportunities for Young Men," *ibid.*, XVII (Oct., 1899), 293-94; George Gunton, "Prosperity and the Cost of Living," *Lecture Bulletin*, V (April 1, 1902), 357-58.

become dulled and brutalized by the constant repetition of operations, Gunton maintained that with his drudgery diminished as heavy machinery took over most of the laborious work, and with less strain upon his nervous system the worker could devote his more extensive free time to employing his "fresh, untired" mind to "elevating himself."³⁹

But large-scale production and material wealth had a significance far transcending the benefits which the workers derived. Wealth was the "great liberator," the "main foundation of advance." Cultural progress, intellectual attainment, and even a higher conception of human life each had its "root in the subsoil of industrial welfare." The high level of American civilization was not primarily the product of democratic institutions, racial qualities or universal education. More simply, "it is our industries that make us great."⁴⁰

Accordingly, Gunton gave hearty endorsement to "the mad race for riches." Contending that "To-day's luxuries are tomorrow's necessities," he argued that the consumption of extravagances by the wealthy whetted the desires of the masses and acted as a powerful incentive to their fulfillment.⁴¹ Productive wealth or capital, however, would render its maximum service when concentrated in the hands of the few, for it was axiomatic that when productive wealth was most highly concentrated consumable wealth was most abundantly produced and equitably distributed.⁴²

Gunton insisted, however, that the concentration of economic power result in superior products at reduced prices. Profits were a legitimate reward, but they must be secured by exploiting nature and never by taking advantage of the community. He distinguished sharply between bona fide combinations which were "genuine integrations of capital into larger concerns for productive purposes" and "speculative combinations, illegitimate and uneconomic" which

³⁹ George Gunton, "Pulpit Economics," *Gunton's Magazine*, XII (June, 1897), 367-75.

⁴⁰ Gunton, *Wealth and Progress*, 206-7; George Gunton, "Social Importance of Wealth," *Social Economist*, I (Oct., 1891), 399; George Gunton, "National Greatness," *ibid.*, III (July, 1892), 3; George Gunton, "Course in Social Economics," *Lecture Bulletin*, III (Oct. 7, 1899), 22.

⁴¹ George Gunton, "The Abolition of Poverty," *Social Economist*, III (Aug., 1892), 94; George Gunton, "Public Effects of Great Fortunes," *ibid.*, VIII (May, 1895), 272-78; George Gunton, "Are Luxuries Wasted Wealth," in *Trusts and the Public* (New York, 1899), 61-71; George Gunton, "Are Millionaires a Menace?" *Gunton's Magazine*, XXV (Nov., 1903), 386-91.

⁴² Gunton, *Principles of Social Economics*, 74, 177; George Gunton, "The Economic and Social Aspects of Trusts," *Political Science Quarterly*, III (Sept., 1888), 385-408. (Hereafter cited as P.S.Q.)

were organized primarily to enrich their promoters. He warned repeatedly that combinations of capital would have to divide their gains with the public if they hoped to avoid being put under the "ban of 'burning politics.'" ⁴³

The uneconomic combination, the corner, the speculative merger were vigorously scored. Gunton denounced the formation of the American Ice Company as an attempt to control the supply and extort higher prices from the public and he warmly applauded when the Wire Nail Manufacturers Association was forced to dissolve. John W. Gates was accused of an "absurd abuse of power" when he shut down several plants of the American Steel and Wire Company and issued discouraging statements calculated to depress the company's stock.⁴⁴

Gunton's basic conclusion, however, was that corrupt and illegitimate combinations were the exception rather than the rule. There was always a "minority of heartless and dishonest men in every profession." The important thing was that the abuses were neither a characteristic feature nor an inseparable part of large-scale production and that it was possible through a mobilized moral sentiment and moderate legislation to remove the rotten excrescence while preserving the healthy core.⁴⁵

COMPETITION, EFFICIENCY, AND REGULATION

A great many Americans were not quite so sanguine. Although they might readily acknowledge the economic advantages of mass production, they remained apprehensive of the social and political consequences of combining companies into giant industrial empires. Gunton recognized the depth and intensity of these fears and attempted to allay them by placing the trust movement in its proper

⁴³ George Gunton, "Trusts and How to Deal with Them," *Chautauquan*, X (Feb., 1890), 571-75; George Gunton, "The Economic Errors of Trusts," *Social Economist*, IV (Feb., 1893), 65-74; Gunton, "Large Aggregations of Capital," *Gunton's Magazine*, XII (May, 1897), 337, 341; George Gunton, "The Era of Trusts," *ibid.*, XVI (March, 1899), 161-65; George Gunton, "Trusts and Socialism," *Lecture Bulletin*, IV (April 15, 1901), 172.

⁴⁴ Gunton, "The Economic Errors of Trusts," *Social Economist*, IV (Feb., 1893), 72; George Gunton, "Failure of the Nail Combine," *Gunton's Magazine*, XII (Jan., 1897), 32-38; George Gunton, "The Ice Trust Outrage," *ibid.*, XVIII (June, 1900), 515-19; "Review of the Month," *ibid.*, XIX (July, 1900), 13.

⁴⁵ Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 406-7; Gunton, "Trusts and How to Deal with Them," *Chautauquan*, X (Feb., 1890), 575; George Gunton, "The Proposed Piano Trust," *Gunton's Magazine*, XIV (Jan., 1898), 16-17.

historical perspective and showing that the evils were incidental, far outweighed by the many benefits.⁴⁶

He attempted first to remove from the public's mind the conviction that big business was something totally new to the American economy by minimizing the differences between the giant consolidation and previous forms of business enterprise. Trusts, he argued, were no "sudden monopolistic creation . . . sprung on the community by a few designing conspirators." Rather, they were merely "the last link in an industrial chain more than a century long; . . . no more revolutionary than any of the previous links. . . ."⁴⁷

Gunton also tried to reconcile the consuming public to the decline of atomistic competition as it had been waged by a host of concerns. He did concede that the maintenance of competition was generally advantageous, for in no other way could the community so fully gain the benefits of improved technology and applied science. Gunton hastened to add, however, that the growth of the great corporation did not necessarily destroy competition but in many cases actually revitalized and strengthened it. Effective competition, after all, was in nowise a function of the number of sellers in the market place. It was quite possible for a large number of small-scale competitors to engage in negligible competition while a handful of companies sharing an industry might vie aggressively for control of the market. At the height of the consolidation movement at the turn of the century Gunton proclaimed: ". . . to-day we have competition of giants as compared with that of Lilliputians a quarter of a century ago."⁴⁸

Although he lauded the economic advantages of competition, even as waged among the few, Gunton was severely critical of the concept of "survival of the fittest," which he asserted led to "maximum waste and . . . minimum economic and scientific direction." He denied that "cut-throat competition" and ruthless price-

⁴⁶ In his first major article Gunton catalogued the fears of the public: trusts tended to develop monopolies and drove small capitalists out of business; they destroyed competition which served to restrain prices; they led to the amassing of great fortunes at the expense of the public; and they corrupted politics, controlling legislation in their own interest and against that of the public. Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 387.

⁴⁷ Gunton, "The Economic Errors of Trusts," *Social Economist*, IV (Feb., 1893), 67; Gunton, "The Public and the Trusts," *Chicago Conference on Trusts*, 276-85.

⁴⁸ Gunton, *Principles of Social Economics*, 402-3; George Gunton, "Monopoly and Competition," *Lecture Bulletin*, III (Oct. 28, 1899), 88-90.

cutting necessarily resulted in reduced prices. He emphasized the significant role which the industrial combination could play in fostering real economies through the possible savings involved in vertical integration, by introducing scientific precision into industry, in improving technology, in sharing among the members of an industry the benefits of new inventive processes, and in making possible the employment of highly trained, professional managers. Moreover, big business could not only reduce prices while improving the quality of products, but could also mitigate the severity of depressions. This would occur as the large corporations studied market conditions, made forecasts, and regulated production to anticipated demand.⁴⁹ Such great consolidations as United States Steel Corporation, therefore, offered hope not only for a more highly productive economy but also for a more sound and stable one.⁵⁰

Accordingly, Gunton reserved his highest accolades for precisely those industrial and railroad corporations which were the *bête noire* of the critics of big business. Gunton was convinced that the integrated, trunk line railroads had not only reduced freight and passenger rates and provided relief from "disastrous rate wars and the constant temptation to rate discriminations," but had considerably improved passenger service and provided smoother roadbeds.⁵¹ He credited reduced meat prices to the contributions of the giant packing companies in introducing the refrigerator car and developing scientific methods of killing, dressing, and preserving meat. He praised such oligopolies as the American Sugar Refining Company, United States Rubber Company, and Carnegie Steel Company for making great improvements in the quality of their products as well as reducing prices. These were the "legitimate" industrial combinations, established to secure the benefits derived from large-scale production and conducted "in a sensible, economic manner, seeking success through the superior service . . . [they] can render to the public."⁵²

⁴⁹ It was Gunton's contention that one primary cause of depressions was the behavior of overeager small-scale manufacturers who began to overproduce as soon as prices rose. Gunton, *Principles of Social Economics*, 382-96; George Gunton, "Trusts and Business Stability," *Gunton's Magazine*, XX (Feb., 1901), 121-22.

⁵⁰ George Gunton, "Billion Dollar Corporation," *Gunton's Magazine*, XX (May, 1901), 423-24.

⁵¹ George Gunton, "Crusade Against Prosperity," *ibid.*, XVII (Sept., 1899), 175-76; "Review of the Month," *ibid.*, XX (Feb., 1901), 106-7.

⁵² Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 395-97; Gunton, "Trusts and How to Deal with Them," *Chau-*

Especially was Gunton impressed with the organizational structure and efficient operations of Standard Oil.⁵³ While condemning the crude oil producing communities as "monuments of industrial sloth," Gunton lauded Standard Oil for reducing the price of refined petroleum from markedly in excess to near the level of crude, for greatly improving the illuminating qualities of petroleum, for almost entirely eliminating the danger of explosion and, through the advantages of vertical integration and diversification, for converting waste into valuable by-products. In addition, Standard Oil had performed a national service by wresting the foreign market from Russian competition.⁵⁴ Gunton vigorously took up the cudgels against the critics of the oil monopoly. Henry D. Lloyd's *Wealth Against Commonwealth*, he charged, "had scarcely an honest quotation in it," and Ida Tarbell was even more harshly criticized.⁵⁵

Gunton also declined to sidestep the issue of monopoly, which he conceded was "what the moral sense of the people [was] really opposed to." He contended that monopoly was a benefit or an evil depending upon how it was obtained and employed. Certainly, the possession of monopolistic power did pose a threat; "Monopoly

tauquan, X (Feb., 1890), 572-74; Gunton, "Large Aggregations of Capital," *Gunton's Magazine*, XII (May, 1897), 388-39; Gunton, "The Public and the Trusts," *Chicago Conference on Trusts*, 279; George Gunton, "The Beef Trust," *Gunton's Magazine*, XXIII (July, 1902), 46-47.

⁵³ On the question of Gunton's relations with Standard Oil, the author is in essential agreement with Professor and Mrs. Hidy that "Although for some years the company helped to finance Gunton's work, he was an independently minded journalist." *Pioneering in Big Business*, 860. Evidence pointing to this conclusion includes: newspaper reports of his lectures before Rev. Newton's class in social economics which indicate that his philosophy was well formulated before the financial assistance began; that Gunton opened his journal to a wide range of views, some hostile to big business; and that he himself continued to maintain a position favoring shorter hours, collective bargaining and government aid to labor which was far in advance of the prevailing attitude of the top leadership of Standard Oil. See *New York Times*, Jan. 19, 27, 1888. For what it is worth, Gunton put himself on record: "I do not regard myself as under the slightest obligation to change my views or policy by receiving aid from anybody." Gunton to Theodore Roosevelt, April 1, 1901, Roosevelt Papers, Library of Congress.

⁵⁴ Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 392-97; George Gunton, "Large Aggregations of Capital. Are They Necessary?" *Independent*, XLIX (March 4, 1897), 7-8; George Gunton, "Fresh from the Oil Regions," *Gunton's Magazine*, XIII (Sept., 1897), 155-63; George Gunton, "Standard Oil and Carnegie Profits," *Lecture Bulletin*, III (March 3, 1900), 500.

⁵⁵ George Gunton, "Integrity of Economic Literature," *Social Economist*, IX (July, 1895), 13-24; George Gunton, "Ida Tarbell's Tale of the Standard Oil," *Gunton's Magazine*, XXVI (Feb., 1904), 95-107.

is to industry what despotism is in political government," and it was always a risk that the despot might not be benevolent. He made a strong distinction, however, between monopolies created by exclusive political or legal privileges which led to the arbitrary exclusion of competitors and a domination of the market acquired by the exercise of superior methods and management. The former was always an unmitigated evil. But when control of the market was obtained "entirely without political privilege, without legislation, without any arbitrary restrictions, but solely by the power to produce cheaper and better and supply the community more efficiently, then that control . . . is not a social evil, but is a real reward of superiority and excellence."⁵⁶

But how was the public to be protected against excessive charges once the giant consolidations became firmly entrenched? Here Gunton followed such economists as John Bates Clark in placing principal reliance upon the effectiveness of potential competition. Gunton was certain that as soon as the monopolist raised his price to an abnormal level and began to reap inordinately high returns, investment capital would at once begin to flow into the industry. This safeguard was "as constant in its operation as the force of gravitation." Never ceasing, it awaited only "the assured opportunity to operate."⁵⁷ The economic effect, therefore, was substantially the same as if a new competitor was already there since to keep him out required the same vigilance and concern for the public welfare as would be necessary to drive him out.⁵⁸

But although Gunton believed strongly in the benefits to be derived from a competitive economy, he declined to embrace all the implications of Manchesterian economics. Quite the contrary, he announced that his own teachings were the very "antithesis of laissez-faire," and he became a persistent critic of Spencerianism. Basically, Gunton rejected Spencer's position that society was an organism subject to the immutable laws of an orderly universe. Rather, averred Gunton, the state was simply an association of people joined

⁵⁶ Gunton, "Trusts, and How to Deal with Them," *Chautauquan*, X (March, 1890), 701; Gunton, "Monopoly and Competition," *Lecture Bulletin*, III (Oct. 28, 1899), 81, 95; George Gunton, "Trusts' and Monopolies," *Gunton's Magazine*, XIX (Oct., 1900), 344-49.

⁵⁷ Gunton, *Principles of Social Economics*, 403-7; Gunton, "Trusts' and Monopolies," *Gunton's Magazine*, XIX (Oct., 1900), 351.

⁵⁸ Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 402-3; Gunton, "Monopoly and Competition," *Lecture Bulletin*, III (Oct. 28, 1899), 90-91.

together to promote individual well-being. He agreed with Lester Frank Ward that progress occurred as man subjected natural forces to human purposes and gave "scientific direction" to the flow of events. Therefore, he took exception to the widely held viewpoint that in an unrestrained struggle for existence the fittest survived. Actually, it was far more likely that the inferior but more vicious and unscrupulous would emerge triumphant. Furthermore, man had no right to plead exemption from social controls merely by claiming an inherent right to own private property. The concept of absolute rights was a legal fiction "which nobody should be expected to take seriously." Rights were to be sustained by the governing forces of society just so long as they were "used consistently with the rights of others and the welfare of the community."⁵⁹

Gunton was a vigorous critic of those who invoked laissez-faire concepts to strike down social legislation. The economic principles of the Manchester Liberals were to Gunton "erroneous and pernicious," and "as false as they are dreary." As for Spencer, the economic ideology of that philosopher was deplored for giving encouragement to all "narrow-souled pessimists, . . . greedy, heartless employers and non-progressive public functionaries. . . ." It gave aid and comfort "to the enemies of every movement of social improvement."⁶⁰

Gunton did not, however, favor governmental activity as good in itself. Indeed, he much preferred private initiative and was Hamiltonian in his concept of the state as an instrument designed to foster the varied economic interests in society rather than to regulate them.⁶¹ The functions undertaken by government should be largely protective, educational, and impersonal in their nature and should be performed with the view in mind of preparing the individual eventually to accomplish the tasks himself. The objective to be pursued should be to "promote individuality without incurring the follies of laissez faire and utilize the educational and protective

⁵⁹ Gunton, *Principles of Social Economics*, 283-94; Gunton, "Society and Sympathetic Strikes," *Social Economist*, VII (Nov., 1894), 265; Gunton, "Coal Strike and the Public," *Gunton's Magazine*, XXIII (July, 1902), 23.

⁶⁰ George Gunton, "The Social Economist," *Social Economist*, I (March, 1891), 2; George Gunton, "Atkinson and Economic Methods," *ibid.*, III (Sept., 1892), 130; George Gunton, "Spencer's Last Book," *Gunton's Magazine*, XII (May, 1897), 292-94; George Gunton, "The Death of Herbert Spencer," *ibid.*, XXVI (Jan., 1904), 52-53.

⁶¹ George Gunton, "Back to Hamilton," *Gunton's Magazine*, XI (Aug., 1896), 126-32; George Gunton, "What We Owe to Hamilton," *ibid.*, XIV (June, 1898), 364-75.

functions of the states without incurring the dangers of paternalism." ⁶²

Gunton believed that industrial combinations were within the purview of government action. But if the community was to secure the greatest benefit from the use of capital the state should promote rather than restrict the safe concentration of productive enterprise. He searched for methods which would "bring corporations within the jurisdiction of the law without crippling their industrial usefulness." Foreshadowing the rationale of the rule of reason, Gunton insisted that behavior rather than mere size or potential capacity for harm must be made the criteria for judging big business.⁶³

He recommended that all corporations possessing franchise privileges be placed under considerable governmental regulation, since they were exempt from the restraining influence of competition. As for other large concerns, Gunton elaborated a program similar to that associated with the New Nationalism of Theodore Roosevelt. It consisted of government inspection and publicity coupled with federal incorporation for all companies engaged in interstate commerce, with the chartered concern having the privilege of carrying on business throughout the country. In addition, the federal government could exert its influence by furnishing frequent and reliable statistics, which would facilitate the operation of potential competition, and by withdrawing tariff protection from products the prices of which were raised by big business.⁶⁴ Gunton intimated that he might well have proposed a more vigorous program were it not for his fear that harsh regulation would inevitably enmesh business in politics and eventuate in wholesale corruption.⁶⁵

The dangers of eventual abuses, however, were at worst fear-provoking flashes of lightning in an otherwise cloudless sky. The tre-

⁶² Gunton, *Principles of Social Economics*, 298-319; Gunton, "Labor and Capital," *Lecture Bulletin*, V (Nov. 1, 1901), 104; "Question Box," *Gunton's Magazine*, XXIV (Jan., 1903), 42-43.

⁶³ Gunton to Theodore Roosevelt, March 26, 1900, Roosevelt Papers; George Gunton, Review of Richard T. Ely's *Monopolies and Trusts*, *Gunton's Magazine*, XVIII (June, 1900), 565-67; George Gunton, "The New Anti-Trust Law," *ibid.*, XXIV (March, 1903), 189-96.

⁶⁴ Gunton, "The Economic and Social Aspects of Trusts," *P.S.Q.*, III (Sept., 1888), 407-8; George Gunton, "The Era of Trusts," *Gunton's Magazine*, XVI (March, 1899), 162-64; George Gunton, "Large Corporations and Free Government," *Lecture Bulletin*, IV (May 15, 1901), 190; George Gunton, "Trust Regulation," *ibid.*, VI (Oct. 1, 1902), 36.

⁶⁵ Gunton, "Large Corporations and Free Government," *Lecture Bulletin*, IV (May 15, 1901), 177-202; George Gunton, "Influence of Corporations on Government," *Gunton's Magazine*, XXI (Sept., 1901), 252-54.

mendous increase of wealth made possible by methods of large-scale production and its increasingly equitable distribution were inaugurating in America an era of material well-being and hence of cultural and social advancement. Primarily responsible for this were the aggregation of capital so "indispensable to modern progress" and the inevitable tendency which preceded it, increased consumption by the masses. It was the constant reiteration and elaboration of this theme that constituted Gunton's chief contribution to the defense of big business.

CONCLUSION

A number of conclusions can be drawn from a study of Gunton's career and ideology. In a general sense, it strongly suggests the need for additional investigation into the background and motivations of the defenders of big business. Certainly it is ungenerous as well as naïve to conclude, as some authors have done, that the defenders were all subservient tools of the trusts. Nor, as Gunton's position also indicates, were they necessarily proponents of the negative state.⁶⁶ Actually, Gunton's economic philosophy closely paralleled that of such representatives of organized labor as Samuel Gompers, Henry White, and the leaders of the railroad brotherhoods.⁶⁷ It was an ideology, furthermore, in good part also acceptable to the more prescient and realistic of the business elite of the period.⁶⁸ Gunton served, therefore, as spokesman for the more moderate and pragmatic members within the ranks of both management and labor.

But if, as Theodore Roosevelt noted approvingly, Gunton acted

⁶⁶ For further documentation of these points see Jack Blicksilver, "A Study of Some Defenders and Certain Aspects of the Defense of Big Business in the United States, 1880-1900" (Unpublished Ph.D. dissertation, Northwestern University, 1955) and Edgar A. Toppin, "A Study of the Defense and Defenders of Big Business in America, 1900-1914" (Unpublished Ph.D. dissertation, Northwestern University, 1955).

⁶⁷ Samuel Gompers, "What Does Labor Want?" a paper read before the International Labor Congress, Chicago, Sept., 1893, in *Addresses and Editorials* (n.p., n.d.), New York Public Library; Samuel Gompers, "The Control of Trusts," *Chicago Conference on Trusts*, 330; Henry White, "A Period of Doubt and Darkness in a New Industrial Era," *ibid.*, 323-29; E. E. Clark, address, Convention of the National Association of Railway Commissioners, *Proceedings* (1898), 20-25.

⁶⁸ United States Industrial Commission, *Report*, VII, 753, 810-11; William A. White, "Hanna," *McClure's Magazine*, XVI (Nov., 1900), 58-59; Ralph M. Easley, "What Organized Labor Has Learned," *ibid.*, XIX (Oct., 1902), 484-88; Thomas C. Cochran, *Railroad Leaders, 1845-1890* (Cambridge, 1953), 33, 179-80.

as a "healthy anti-scorbutic" to the labor radicals,⁶⁹ he did offer a dynamic alternative to the return of small-scale individualistic enterprise. And in doing so he did not forget to put first things first. Wealth, Gunton consistently maintained, "is not the chief end of man, but man is the chief end of wealth. . . ." ⁷⁰

Finally, in forcefully pointing out to the increasingly class-conscious workingman and his often impersonal employer the duties and obligations of each to the other and to society, he played a significant role in establishing a foundation upon which a greater degree of harmony and mutual respect in industrial relations would eventually be built.

⁶⁹ Theodore Roosevelt to John Pierpont Morgan, March 27, 1901, Morison, ed., *The Letters of Theodore Roosevelt*, III, 30.

⁷⁰ Gunton, "The Social Economist," *Social Economist*, I (March, 1891), 3.

By Milton J. Nadworny

ASSOCIATE PROFESSOR, COMMERCE AND
ECONOMICS AT UNIVERSITY OF VERMONT

Frederick Taylor and Frank Gilbreth: Competition in Scientific Management

¶ The vital task of measuring jobs in order to establish equitable incentive wage rates is usually accomplished by a combination of techniques involving both time and motion studies. Yet for many years a highly personal competition between leading exponents of each type of study prevented a union of techniques from taking place. In the early days of the scientific management movement, Frank Gilbreth was a fierce admirer of Frederick W. Taylor, but Taylor and his disciples rejected Gilbreth, whose micromotion techniques came into competition with the Taylorites' stop watches. Thereby scientific management was split into two antagonistic camps and the course of the movement decisively influenced.

A century has elapsed since the birth of Frederick W. Taylor, the so-called "Father of Scientific Management," and it has been almost seventy-five years since Taylor began to evolve his management system. Note has been taken, and will continue to be taken, of Taylor's contributions to management philosophy and practice and to the improvement and advancement of managerial and business efficiency. Taylor was an innovator and an entrepreneur in his field, and he had more than his share of emulators, rivals, and disciples. When Taylor died in 1915, the field of management consulting which he took a leading role in developing was much less institutionalized than it is today; the impact of individual consultants' personalities, ideas, and techniques was relatively greater than at present; and the recognition and identification of various programs and methods were rather highly personalized. The label of "scientific management" is the one with which we are most familiar today, but in 1915, and earlier, management programs were most likely to be identified with the names of the management engineers themselves, e.g., "Taylor system," "Gantt system," "Emerson sys-

tem," and so forth. In such a setting, the activities, attitudes, and personalities of the outstanding leaders were bound to have great influence upon the manner in which this field of management consulting developed. A further consideration is that the rewards of a successful practitioner were twofold: (1) the psychological and social rewards of being recognized, and honored, as a leader and developer of a given line of thought and practice; and (2) the economic rewards of a successful practice. These two factors are almost inextricably intertwined in the development of the scientific management movement, as is effectively illustrated by the relationship between perhaps the two most popular and famous men in the field — Frederick W. Taylor and Frank B. Gilbreth.

By the time Gilbreth began his acquaintanceship and association with Taylor in 1907, the latter had laid almost all of the groundwork for his management system; in addition, he had ceased to perform consulting work for pay after 1903, the year in which he read his paper, "Shop Management," before the American Society of Mechanical Engineers. Furthermore, he had gathered around him a group of disciples who formed the core of the scientific management movement, and all of whom worked with him at one time and received training in his methods. They were Henry L. Gantt, Carl G. Barth, Horace K. Hathaway, Sanford E. Thompson, and Morris L. Cooke. Taylor's role was an interesting one; he apparently considered himself the patriarch and protector of scientific management, and insisted that he was to certify who was qualified to be a "scientific management expert," and thereby have a decisive influence upon the methods used to introduce scientific management into various firms. He consistently warned acquaintances and potential clients that unless a scientific management "expert" (one whom he designated as such) introduced his system, "strikes and labor troubles" would be the result.¹ According to Taylor, the number of experts was limited to Barth, Gantt, Hathaway, Thompson, and Cooke. (After 1911, Barth and Hathaway were most often recommended.)

Frank Gilbreth, on the other hand, had worked for years in the building trades as an independent contractor and builder. He was an active member of the Society for the Promotion of Engineering Education and of the A.S.M.E. Gilbreth became acquainted with

¹ See Taylor to Charles R. Pratt, Dec. 8, 1906; Taylor to F. P. Luther, Feb. 4, 1907; Taylor to Henry R. Towne, Dec. 2, 1910; Taylor to Lewis H. Kilbourn, Nov. 9, 1911, *Frederick W. Taylor Collection*, Stevens Institute of Technology.

Taylor's system by reading "Shop Management," through contracting work he did for some "Taylorized" firms, and by permitting Sanford Thompson to take some time studies of workers on one of his construction jobs. Gilbreth's admiration for Taylor was unbounded, and he reputedly honored the spot in the Engineering Societies Building in New York where he first met Taylor in 1907.² He ardently desired admission into the inner circle of the Taylor following, but the latter and his closest associates were reluctant to satisfy that desire. However, Taylor and Thompson were not above picking Gilbreth's brains for his ideas and methods, which they apparently intended to incorporate into an edition of their own book, *Concrete, Plain and Reinforced*.³ Yet, when Gilbreth asked for a supply of Hathaway's record-keeping blanks (evidently at no charge), the Taylorites were incensed, and they feared that Gilbreth's employment of Taylor methods in construction work was for the purpose of making "a further reputation for himself" by wrongly labeling such methods as the "Gilbreth system," rather than "Taylor system." The management engineers agreed that "Mr. Gilbreth is not a man whom it would be well to place a good deal of dependence upon unless there is something further in view," and that he should be denied access to the Taylor tools and secrets unless he were "ready to pay for it."⁴

What the roots of this attitude were is not clearly established, but Taylor appears to have abided rather consistently by this policy, for Gilbreth supplied one valuable asset for his scientific management program: he could speak "so convincingly about modern scientific management."⁵ As a result, Gilbreth was selected by Taylor to represent the latter in describing the philosophy and program of the Taylor system to the New York Civic Forum in 1911 and the Western Economic Society in 1913.⁶ He was also commissioned by Taylor to answer letters from the readers of the latter's *The Principles of Scientific Management*.⁷ It was Gilbreth, too, who was

² Edna Yost, *Frank and Lillian Gilbreth* (New Brunswick, 1949), p. 155.

³ Taylor to Sanford Thompson, Jan. 6, 1908, Taylor Collection.

⁴ Thompson to Taylor, Jan. 11, 1908; Taylor to Horace K. Hathaway, Nov. 20, 1908; Thompson to Taylor, Nov. 24, 1908; Thompson to Hathaway, Dec. 7, 1908, Taylor Collection.

⁵ Morris L. Cooke to Taylor, Sept. 9, 1910; Taylor to Carl Barth, Jan. 12, 1911, Taylor Collection.

⁶ See Taylor to Gilbreth, March 21, 1913, Taylor Collection, and Taylor Society *Bulletin*, Vol. 6 (June, 1921), pp. 117-18.

⁷ These answers took the form of a book, namely, *Primer of Scientific Management* (New York, 1912).

the original driving force in organizing the Society for the Promotion of the Science of Management in 1910, which society was later renamed the Taylor Society. There were no dissents at this time from Taylor's contention that Gilbreth "has done our cause a very fine service,"⁸ but "our cause" was not intended to include Gilbreth.

Gilbreth seems to have been oblivious to the attitude of Taylor and his disciples, and, as long as he pursued the vocation of building contractor, he was considered most useful. In 1912, however, Gilbreth turned industrial management — indeed, "scientific management" — consultant. Toleration on the part of the Taylor group turned increasingly to hostility. It is not clear whether this hostility was due to the competitive economic threat presented by Gilbreth, or to a sincere belief that his professional qualifications were low. The latter certainly had to be tempered because of the assignments Taylor continued to give Gilbreth to represent the scientific management group. At any rate, Gilbreth's first big job in this field was at the New England Butt Company in Providence, and the undertaking had the early assistance of H. K. Hathaway (who surveyed the operating procedures of the company and made some recommendations for improvement) and Hathaway-trained aides Royal R. Keely and Albert R. Shipley. Nevertheless, Taylor and his associates were skeptical of the whole project, and Taylor, himself, was sure that Gilbreth's activities would precipitate a strike at the company, for Gilbreth "had no business whatever to undertake the systematizing of a large company without having any experience in this field."⁹ Hathaway believed that there was some hope of ultimate success of the Gilbreth project, but only if Gilbreth proceeded "according to the rules" — presumably, Hathaway's and/or Taylor's rules.¹⁰ When Gilbreth did meet with success and approval at New England Butt, the Taylorites still refused to concede him anything. "Practically all the credit for the work at the New England Butt Company," said Hathaway, "is due [Albert R.] Shipley. . . ."¹¹ The obvious pique was due, most probably, to the fact that Gilbreth was now competing rather successfully with Taylor's chosen "experts."

While the New England Butt installation was in progress, Gilbreth, probably unwittingly, broadened and deepened the com-

⁸ Taylor to Barth, Oct. 2, 1912, Taylor Collection.

⁹ Taylor to Hathaway, Sept. 2, 1912, Taylor Collection.

¹⁰ Hathaway to Taylor, Sept. 2, 1912, Taylor Collection.

¹¹ Hathaway to Taylor, Feb. 19, 1914, Taylor Collection. See also, Yost, *Frank and Lillian Gilbreth*, Chapter XVI.

petitive nature of his relationship with Taylor and his closest followers. In 1912, Gilbreth devised and began to use a technique of work measurement which he called "micromotion study," which employed a motion picture camera to record the performance of a worker on a job, with a clock calibrated in hundredths of a minute placed in viewing range. With this technique, Gilbreth could record the motions, the time, and the conditions surrounding the job. His major objective was the recording, and ultimate simplification and improvement, of the motions of the worker. His method permitted him to time both the motions of the worker and the total job, and also provided an opportunity to reproduce the performance of the worker a relatively unlimited number of times. Gilbreth subsequently devised other schemes of recording and tracing worker motions, but he considered micromotion study to be his most important contribution to scientific management.

Work measurement was, of course, one of the most significant aspects of scientific management. The Taylor program was based on the use of stop watch time study, under which the time study technician determined what the "elements" of a particular job were, and took a number of stop watch readings of each of the elements in developing data from which the ultimate time standard for the job would be developed. Taylor, himself, considered time study to be the "foundation of scientific management,"¹² and the Taylorites were primarily interested in the timing of the job. While Gilbreth was, of course, vitally interested in establishing a standard time for the job, he was perhaps more interested in analysis of work methods and patterns and in achieving economy of motions and effort, and he therefore viewed the setting of work standards from a different point of view. It is therefore not surprising that when Gilbreth described his new technique to the scientific management leader, the reaction was something less than enthusiastic. "Showed micro-motion to Taylor," he noted, "and told him what it would do and told him I was surprised that he did not recognize its meaning. He said it was undoubtedly good where one was investigating the minutia of motions. He acted so that I saw he was hurt and so I changed the subject."¹³ When Gilbreth again tried to impress upon Taylor what he conceived to be the importance of micromotion study, and suggested that his own "process and combination of clocks and motion picture machine should really go with your [Tay-

¹² Frederick Taylor, *Shop Management* (New York, 1911), p. 65.

¹³ Gilbreth Looseleaf Notes (n.d., 1912), courtesy Edna Yost.

lor's] great invention of time study,"¹⁴ Taylor suggested that Gilbreth's "photographic scheme" might enable the latter to "develop a very fine system of time study."¹⁵ Taylor and his disciples maintained that time study automatically included the concept of motion study, as far as they understood it, and therefore viewed micro-motion study as simply another, somewhat unimportant and perhaps irrelevant, appendage to stop watch time study. There is evidence, beginning with Taylor's initial reaction to Gilbreth's description of micromotion, that the Taylor group did not understand the methodology or implications of Gilbreth's technique.¹⁶ As a result, they deprecated micromotion study and increased their distrust of its originator.

Up to this point, the relationship between Gilbreth and the Taylorites was a peculiar one, indeed: Taylor and his confidants distrusted and resented Gilbreth, not the least reason for which seems to be the competitive threat he presented. Gilbreth, on the other hand, apparently assumed that he had received the Taylor blessing, for all of his personal notations reveal nothing but fierce admiration for Taylor and his other associates. Gilbreth got a rather rude awakening in regard to the real attitude of the Taylor group when Taylor and Hathaway reversed the competitive pressure in dramatic fashion.

In August, 1912, Gilbreth was hired by the Hermann, Aukam Company, handkerchief manufacturers, to direct the installation of scientific management methods in its plants. His contracts were renewed every four months throughout 1912 and 1913.¹⁷ In March, 1914, M. C. Hermann paid a visit to Taylor to complain about Gilbreth's work, assuming, as did Gilbreth, that the latter was an acknowledged protégé of Taylor. Hermann stated that he was paying an exorbitant amount of money for the little time and the inferior assistants Gilbreth provided for the job. Taylor suggested Hathaway for the task, and an agreement was reached to the effect that the reorganization of production methods at the handkerchief works would be assumed by him. Hathaway was under the im-

¹⁴ Gilbreth to Taylor, July 29, 1912, Taylor Collection.

¹⁵ Taylor to Gilbreth, Aug. 24, 1912, Taylor Collection.

¹⁶ Royal R. Keely reported to Taylor from New England Butt that Gilbreth was compounding his "mysterious" activities at the company by making preparations to take time studies by means of a motion picture machine(!); Keely to Taylor, Aug. 31, 1912, Taylor Collection.

¹⁷ See, for example, Gilbreth to Taylor, Nov. 14, 1912; May 14, 1913; Sept. 15, 1913, Taylor Collection.

pression that Gilbreth had cancelled his fifth contract with the firm (which Gilbreth denied), but he decided to delay final acceptance until Taylor discussed the situation with Gilbreth himself.¹⁸

From the time when Gilbreth left the building trade and entered into competition with Taylor's chosen disciples, Taylor had become increasingly critical and distrustful of him; by 1914, Taylor was convinced that Gilbreth did not fully grasp the techniques and implications of scientific management.¹⁹ The events at the handkerchief company fit well with Taylor's predispositions and suspicions of Gilbreth's professional ability; Mr. Hermann's complaints were sympathetically received. It is not surprising, therefore, that Gilbreth's side of the story made no favorable impression upon Taylor, and Hathaway got the green light.²⁰ (It is interesting to note that Taylor and Hathaway had already arranged for the latter to take over the consulting work at the firm.)

Gilbreth was aroused and bitter over the action of Taylor and Hathaway, because his fifth contract with Hermann, Aukam was not due to expire until May.²¹ However, he refrained from taking any overt counteraction, apparently because he was in the midst of making preparations for a trip to Germany, where he had a sizable consulting job awaiting him. From this point on, as might be expected, Gilbreth was an acid critic of Taylor and his associates.

Hathaway's reports on Hermann, Aukam described a confused state of affairs there, which Hathaway claimed was brought about by Gilbreth's work — especially, micromotion study. These reports were broadcast by him and Taylor to the rest of the group, and it was generally agreed that, in Hathaway's words, Frank Gilbreth was "either raving crazy or a . . . fakir."²² The Taylorites feared that he would wreak havoc in Germany, especially since newspapers were reporting German Social Democratic protests against the "Americanization" of German General Electric by Gilbreth.²³ Carl Barth and Hathaway urged Taylor to write friends in France and

¹⁸ Taylor to Hathaway, March 10 and 14, 1914; Hathaway to Taylor, March 18, 1914, Taylor Collection.

¹⁹ Taylor to Hathaway, Feb. 3, 1914; Hathaway to Taylor, Feb. 27, 1914, Taylor Collection.

²⁰ Taylor to Hathaway, March 18, 1914, Taylor Collection.

²¹ See Gilbreth Correspondence, Taylor Collection.

²² Hathaway to Taylor, May 18, 1914; see also, Taylor to Cooke, May 22, 1914; Cooke to Taylor, May 27, 1914, Taylor Collection.

²³ N.p. *Herald*, June 8, 1914, Scrapbook of Newspaper Clippings, Taylor Collection; *New York Times*, July 14, 1914, Sec. 3, p. 3.

Germany and "expose" Gilbreth, but the leader of the group was reluctant to do so. "I agree with you that he might discredit the whole movement in Germany," he wrote Barth, "and yet it seems hard to write and point out his incompetence."²⁴ Yet Taylor was not reluctant to give his rather bald opinion of Gilbreth to American acquaintances. He suggested to Professor Lionel S. Marks of Harvard that the latter not "lay too great a stress on the work that is being done by . . . Frank Gilbreth," because Gilbreth was interested solely in money, and was "likely to do great harm to our cause."²⁵

On his part, Gilbreth confided his own sentiments largely to his personal note file. He privately inveighed against Taylor's "bent viewpoint" and "tactless disposition." Gilbreth did not reveal when he first recognized the "absolute lack of human element" in the Taylor system, but in view of the fact that he had wholeheartedly embraced and defended the system prior to 1914, it is obvious that his dissatisfaction stemmed at least partly from a source separate from the system itself. He apparently believed that his difficulties sprang from the variations he introduced into the Taylor program, for he wryly cautioned imaginary readers of his personal notes to "make no changes from Taylor's plan whatever or you will not be able to avail yourself of Taylor's and S.P.S.M. (Society for the Promotion of the Science of Management) militia."²⁶ Throughout 1915 and 1916 he refused to divulge the names of his clients to authors who requested such information for books or articles, claiming that he had to keep these names confidential, because "some people who . . . used to be my friends have made a systematic attempt to get all my jobs away from me. . . ."²⁷

Despite the strong hostility between the Taylorites and Frank Gilbreth, none of the parties involved publicly indicated the existence of this state of affairs. Taylor's death in 1915 undoubtedly deterred Gilbreth from doing so, and World War I extended his period of relative silence. Until 1920, the public, and perhaps most businessmen and management executives, knew little, if anything, of the conflict among the most famous and important leaders in the sci-

²⁴ Barth to Taylor, July 20, 1914; Taylor to Barth, July 28, 1914; Taylor to Gantt, Aug. 7, 1914; Albert R. Shipley to Taylor, Aug. 10, 1914, Taylor Collection.

²⁵ Taylor to Lionel S. Marks, Aug. 29, 1914, Taylor Collection.

²⁶ Gilbreth Looseleaf Notes, Gilbreth Library of Management, Purdue University.

²⁷ Gilbreth to C. B. Thompson, June 19, 1916, Gilbreth Library.

tific management field. Had the conflict been purely personal, it might have remained confined to personal correspondence files and diaries; the fact that professional techniques and businesslike competition were also at stake increased the probability that at least some of the issues would be brought out in the open. Gilbreth and his wife took the initiative in doing so in December, 1920, when they delivered "An Indictment of Stop-Watch Time Study" at a Taylor Society meeting in New York.

The Gilbreths characterized time study as unethical, wasteful, and inaccurate, among other things, although they were careful to point out that they were not personally criticizing Frederick Taylor, "the great founder of stop watch time study."²⁸ (It would, however, have been strange indeed if their audience, and readers of the Taylor Society *Bulletin*, did not construe their strongly adverse criticism of time study to be an attack upon Taylor himself, because the most popular symbol of the latter's program was the stop watch.) The Gilbreths' essential contentions were that time study did not "preserve the best that has been done," employed questionable statistical methodology in arriving at standard times, and was costly because of the inaccurate and useless data it developed.²⁹ They took pains to point out that motion study was not the same as time study, nor "a part of time study," and denounced the developers and practitioners of time study for failing to "co-operate with motion study."³⁰

Obvious personal bitterness was added to professional differences when a general debate on the paper was held during the following April in Philadelphia, when, among others, Carl Barth and Dwight V. Merrick, who was Taylor's time study man as early as 1900, defended the use of stop watch time study. Barth's reference to "myself and other direct disciples of Mr. Taylor," and his "concession" that the Gilbreths had "a far more accurate time measuring device than the stop watch,"³¹ were dashes of salt on some old and unhealed wounds, and served to make Frank Gilbreth's closure far more bitter than the indictment itself. Without specifically naming them, he attacked Barth, Sanford Thompson, and Merrick for defending time study because they were "interested in the profits from the sale of stop watches, time study devices or books describ-

²⁸ Frank B. and Lillian M. Gilbreth, "An Indictment of Stop-Watch Time Study," *Bulletin of the Taylor Society*, Vol. 6 (June, 1921), 102.

²⁹ *Ibid.*, 100, 106.

³⁰ *Ibid.*, 103, 107.

³¹ *Ibid.*, 108.

ing stop watch time study methods."³² At the same time, he laid claim to his own "direct discipleship" by enumerating the occasions when he had acted as Taylor's chosen representative in describing the program of scientific management to different groups.³³ (Despite his differences with Taylor, Gilbreth wished to bear the Taylor stamp of approval for personal and/or professional reasons.)

It would be interesting, and important, to know how businessmen in general, and potential clients of the management engineers in particular, reacted to this episode. It is possible that these latter were not Taylor Society members, or that they did not read the Society's *Bulletin*. It seems rather unlikely that there would be complete ignorance of the now-open conflict between the time study and motion study leaders in that part of the business community where there was some interest in the employment of scientific management techniques as well as scientific management consultants. What the actual effect was is not known.

For Gilbreth, of course, the issues were not resolved. He was still unhappy and displeased about the Taylor associates' lack of consideration and appreciation of him and his work. The failure of the Taylor Society, "which he started," to grant his work the recognition he believed was due it was also a sore spot.³⁴ Gilbreth believed that he had no recourse but to bring his grievances into the open. "We believe we have already waited more than long enough," he told Morris L. Cooke. "The engineers of Europe and the labor unions of America have waked up to the unscientific pretensions of the proponents and advocates of the stop-watch. We refuse to be classified with those who believe that anything but the best is good enough in Scientific Management . . . We shall continue to stand for Science in Management, even if we stand alone." He reminded Cooke of the Hermann, Aukam episode, and complained that micromotion study was "deliberately and intentionally misrepresented and belittled" by Taylor and his closest followers. All that he wanted from Cooke and the Taylor Society, he said, was a "square deal."³⁵

Apparently, he did not get what he considered to be a "square deal," for he continued to attack stop watch methods and to adver-

³² *Ibid.*, 117. As early as 1906 or 1907, Thompson was in the business of selling stop watches, and Merrick had recently published a book on time study methods.

³³ *Ibid.*, 117-18.

³⁴ Lillian M. Gilbreth to Morris L. Cooke, April 16, 1921, Gilbreth Library.

³⁵ Frank Gilbreth to Cooke, Sept. 22, 1921, Gilbreth Library.

tise the superiority of motion study. Gilbreth's popularity as a public speaker appears to have had some effect, because Sanford Thompson decided to take it upon himself to arrange a truce. "Is it wise," he admonished Gilbreth, "even from the sordid viewpoint of good business policy, to damn Taylor and all his works up hill and down before large audiences . . . ? You and we are working for the same end (1) to develop the science and philosophy of management, and (2) to make a darn good living." Thompson suggested that these objectives could be achieved through the employment of more "constructive" means.³⁶

Gilbreth denied he was attacking either Taylor or Thompson; "To damn your stop watch methods as being rule of thumb," he wrote, "is quite different from what you accuse me of. . . ." He charged that Thompson's partner, William O. Lichtner, had employed an unfair competitive argument by publicly stating that micromotion studies were too expensive to use, but that no public retraction was made, despite the fact, Gilbreth suggested, that "neither of you know anything about it."³⁷ Nevertheless, Thompson's admission that both he, unquestionably a "direct disciple" of Taylor, and Gilbreth were "working for the same end," was music to Gilbreth's ears. Gilbreth finally admitted that Thompson's "smooth and tactful" words had poured oil on troubled waters.³⁸ Whether a real rapprochement was in the offing remains unknown, because before anything more tangible could be developed, Frank Gilbreth died suddenly.

The issues raised by Thompson were particularly vital, for when one consultant claims that another's basic technique (in this case, time study) is almost valueless at the same time that his rivals are insisting that his own method (micromotion study) is too expensive for businessmen to use economically, the demand for the services of all of them may be reduced. Thompson's reference to making "a darn good living" might be an indication that such was the case, but no evidence is at hand either to support or refute it. It remains, however, a reasonable assumption that such was the case.

Despite the death of Frank Gilbreth, the competitive nature of his relationship with the "direct disciples" of Taylor was continued by Mrs. Gilbreth. While she directed her own consulting business in the field of motion study and work simplification, she also concen-

³⁶ Thompson to Gilbreth, April 18, 1924, Gilbreth Library.

³⁷ Gilbreth to Thompson, April 23, 1924, Gilbreth Library.

³⁸ Gilbreth to Thompson, June 10, 1924, Gilbreth Library.

trated on achieving recognition for her husband's role in the development of the scientific management movement and on gaining wider acceptance of the concept and program of micromotion study. Ultimately, both were achieved.³⁹

What has happened in the field of work measurement is that an accommodation has taken place, and both stop watch time study and motion study and its derivatives are used, either by individual firms or within the same work measurement program. It is, in a sense, a triumph for the Gilbreths, and particularly Frank Gilbreth, who, long ago, suggested to Taylor that motion study "should really go with your great invention of time study." It was not, of course, the kind of economic or intellectual triumph that Gilbreth might have desired in 1921, but rather a process of gradually increasing co-operation between the techniques and their representative practitioners, his more consistently sought goal. No doubt the absence of the leading antagonists and competitors expedited the process of accommodation.

³⁹ When Gilbreth died in 1924, note was finally made of his role in forming the S.P.S.M. in the obituary in the *Bulletin*, and the story was told in some detail by Robert Kent in 1931. See Kent, "The Taylor Society Twenty Years Ago," *Bulletin*, Vol. 17 (Feb., 1932), 39-41. See also, Milton J. Nadworny, "The Society for the Promotion of the Science of Management," *Explorations in Entrepreneurial History*, Vol. 5 (May 15, 1953), 244-47.

By Fritz Redlich

RESEARCH CENTER IN
ENTREPRENEURIAL HISTORY
AT HARVARD UNIVERSITY

**Academic Education for Business:
Its Development and the Contribution
of Ignaz Jastrow (1856-1937)
In Commemoration of the Hundredth Anniversary
of Jastrow's Birth**

A study of the career of Ignaz Jastrow, guiding spirit of the Berlin HANDELSHOCHSCHULE, invites attention to the broader subject of academic education for business. There was a close relationship between the educational philosophy embodied in the founding of the Berlin school in 1906 and in that of the Harvard Graduate School of Business Administration in 1908. This relationship was not accidental, and establishment of these two institutions constituted a decisive point in a long history, beginning in the eighteenth century. Over the years, the basic difficulty had been that of endeavoring to raise professional training for business above the secondary school level. In those instances during the nineteenth century where university-level training was attempted, the result was overemphasis on the general background of business. In 1900, despite the many promising experiments in European countries and America, a sound foundation for high-level business training was still lacking. Jastrow's HANDELSHOCHSCHULE was the first institution that focused on the real world of business and at the same time was truly academic in nature. This same combination was also effected at Harvard, where the basic objectives were implemented by reformed teaching techniques and by a continuing program of research upon business subjects.

On September 13, 1856, Ignaz Jastrow, onetime professor of economics at the University of Berlin, was born in a small Eastern German town, now situated in Polish territory. A man of extraordinary intelligence and scholarly honesty and at the same time an educator of the highest order, he was nevertheless not destined to become one of the greatest academicians of his time and generation. A strange inability to go through with *large* research projects, being partly due to the trend of his time toward painstaking research in primary materials and the discovery of factual detail, kept

him from ranking with the foremost of his colleagues. On the other hand, his interest in the training of beginners, a field in which he excelled, precluded his leaving a school of academic teachers comparable with that of Schmoller's or of the great Viennese. Yet he left his imprint on more than one field. It was he who laid the basis for the measuring of unemployment so that a systematic policy toward alleviating mass unemployment could first be put on firm grounds. He was the one to see the possibility of a scientific treatment of the principles of public administration, a possibility all but forgotten since the late eighteenth century. And last but not least, he occupies an honorable place in the history of education for business. It is his role in the last-named field which one of his former students and faithful friends records here in memory of the hundredth anniversary of his birth.¹

However, the subject to be treated in this article is, in fact, much broader than indicated so far. In order to establish Jastrow's place in the development, we have to study the history of academic education for business, a topic which is, of course, of permanent interest to business historians and educators. And it is especially relevant for those more or less closely connected with the Graduate School of Business Administration of Harvard University, for Ignaz Jastrow stands out among the builders of the Berlin *Handelshochschule*, as his personal friend, Frank W. Taussig, does among those of the Harvard Business School. Both institutions were founded in the same decade and only a few years after the two friends had met and exchanged their ideas on the subject. A comparison of the different backgrounds of the achievements as well as of the motives and goals of the builders (Jastrow and Taussig included) and of those who guided the first steps of the new schools (Ignaz Jastrow and Edwin F. Gay) would have been appropriate at all times. It is even more timely at the moment when both institutions have reached or are reaching, respectively, their fiftieth birthdays; that in Berlin badly battered and with lost independence, that at Harvard flourishing as never before. It is for such a comparison that this article, in addition to its other purposes, seeks to provide material.²

¹ I attended the celebration of Jastrow's seventieth birthday, when he delivered a charming speech describing the social and cultural background of the time when he grew up; in the year of his eightieth birthday I was already in the United States. See also Erich Eyck, "Erinnerung an Ignaz Jastrow" in *Deutsche Rundschau*, LXXXII (1956), 981 ff. and the article on "Jastrow" by Frieda Wunderlich in *Internationales Handwörterbuch des Gewerkschaftswesens*, ed. Ludwig Heyde (Berlin, 1930-1932).

² The best bibliography of my topic is to be found in August Wilhelm

Ignaz Jastrow's beginnings were in an area far removed from business; as a matter of fact, he did not even start as an economist. Jastrow was trained as an historian in the school of the well-known Berlin professor Karl Wilhelm Nitzsch. Later he was for some time an assistant to no less a person than Leopold von Ranke. He had planned to become a history teacher at a *Gymnasium* and only when, due to the strange hiring methods then prevailing, he despaired of ever landing a job, he decided on an academic career and in 1885 became a lecturer (*Privatdocent*) of history at the University of Berlin. When in his thirties, however, for reasons which are difficult to understand, he turned his interest from history to economics, and in 1892 his *venia legendi*, to use the official term for "permission to teach," was changed to suit his new field of interest. In addition, in 1903 Jastrow became the economic adviser of an outstanding Berlin trade association, of which more will be said later. It was in the service of this organization that he became concerned with education for business.

EIGHTEENTH-CENTURY EXPERIMENTS

Ignaz Jastrow would not have been the trained historian that he was, had he himself not seen his place in the history of education for business.³ He was aware of the fact that traditional mercantile education was embodied in the institution of apprenticeship and in the practice of advanced training abroad of young merchants in the firms of relatives, correspondents, or other business friends. This traditional training pattern rested on two pillars: knowledge of foreign countries and foreign languages on the one hand, and skills in bookkeeping, handwriting, and the use of mercantile arithmetic (*kaufmännisches Rechnen*) on the other. These elements dominated the practical training of merchants in the Mercantilist period, roughly between the sixteenth and the early nineteenth centuries.⁴ Those who had absorbed such knowledge and skills belonged to the

Fehling's paper "Collegiate Education for Business in Germany," in *Journal of Political Economy*, XXXIV (1926), 545 ff. But the bibliography refers to Germany only. Not all the items cited therein are available in the United States. The above volume of the *Journal of Political Economy* contains a few other pertinent papers not used in the following presentation.

³ *Kaufmannsbildung und Hochschulbildung. Bürgertum und Staatsverwaltung. Zwei akademische Reden gehalten in der Aula der Handelshochschule, Berlin* (Berlin, 1907).

⁴ Very typical is the pertinent presentation by Thomas Watts, *An Essay on the Proper Method for Forming the Man of Business: in a Letter* (London, 1716, and later editions), yet in some respects it points to the future.

educated part of the population, like the academically trained professionals and the members of the nobility whose education was determined by their exalted role in a stratified society. Nevertheless, as early as the eighteenth century, in the Era of Enlightenment, the idea was conceived of making those mercantile subjects the content of a theoretical training for business, modeled (with some distinct differences to be discussed later) after academic teaching. Four names stand out in this connection: two planners, Jacob Marperger (1656-1730) and Malachy Postlethwayt (1707-1767), and two "doers," Marquez Sebastão Pombal (1699-1782) and Johann Georg Büsch (1728-1800).⁵

Marperger, the well-known cameralist writer, opens the parade.⁶ He was, in fact, the earliest German economist to propose a systematic and formal schooling for businessmen. First of all, he thought of basic instruction in writing, arithmetic, and bookkeeping as had been common since late medieval times. But he went beyond that, and his fertile mind developed three suggestions, all of which tended in the direction of an academic education of businessmen. (1) He suggested in the second volume of his *Nothwendig und nützliche Fragen über die Kaufmannschaft* (of 1714/15) that *professores mercaturaे* be attached to the existing universities. So far so good, but the motivation of this sensible proposal is indicative of the early stage of economic development in which it was made. Impressed as he was by the association of the English gentry with the business class, Marperger aimed at higher social prestige for

⁵ Of an antiquarian interest only is a project to which Professor Henrietta Larson has drawn my attention; she has pointed to it before in the unsigned paper "A Proposal for Schools of Business Administration in Seventeenth-Century England" in *Bulletin of the Business Historical Society*, XV (1941), 43 ff.

The item in question, entitled *Essays on Trade and Navigation in Five Parts: The First Part* (London, 1695), was written by Sir Francis Brewster (d. 1704), a citizen, alderman, and (in 1674) mayor of Dublin, also an M. P. in the Irish House of Commons. In the introduction to the item (see especially p. vi) he suggested theoretical and practical training of future businessmen by experienced merchants. The schools to be established should simultaneously be enterprises, organized as joint-stock companies. Each student would invest in £1000 of stock, and together they would trade with a capital of £20-30,000 to all parts of the world. We meet here a typical seventeenth-century project and in Brewster, a braggart, the typical projector. The only significance of the immature scheme lies in its being representative of the first stirrings in a right direction.

A note on Brewster is in the *Dictionary of National Biography*.

⁶ To be exact, there exists a Königsberg doctor's thesis of 1704 by Gottfried Albert Pauli, which points to our subject under the title: *An Academiae in Emporiis sint Erigendae*.

German merchants through better education. Their daughters would then be less inclined to marry noblemen and scholars, and the fathers' capital would remain invested in business. When this proposal, understandably enough, did not materialize, Marperger changed his approach. (2) In his *Trifolium mercantile aureum oder dreyfaches güldenes Kleeblatt der werten Kauffmannschaft . . .* (Dresden and Leipzig, 1723), he advanced the idea of a commercial academy; and, incidentally, he actually offered the Saxon government to establish such an institution. It would teach mercantile arithmetic; double-entry bookkeeping; mercantile correspondence and billing; handwriting (including orthography [spelling], stenography, and cryptography [i.e., what we call coding]); business technique (*unterschiedliche die Kauffmannschaft angehende Curiosa*, as he queerly expressed it); commercial geography; newspaper reading with a view to acquiring information on current history and the state of business affairs (*Conjuncturen*); *Warenkunde*;⁷ technology; geometry; mechanics; and languages. Finally (3) Marperger aimed at the education of accomplished businessmen together with government officials on the very highest level. He submitted the plan of a kind of staff college (*Informationskollegium*) at which professors of history, philosophy, and law would lecture on commerce, commercial policy, economics, *Warenkunde*, geography, economic history, navigation, colonies, and a few branches of law, namely, natural law, law of nations, and civil law.⁸

In the 1740's, i.e., about two decades after Marperger, Malachy Postlethwayt, the economic writer, conceived a similar plan which he presented under various names.⁹ Dissatisfied with the training

⁷ This old German term has been rendered by an English writer as "knowledge of products"; see Frederick Hooper and James Graham, *Commercial Education at Home and Abroad* (London, 1901), 60. One also finds the term "study of merchandise."

⁸ Although the Kress Library is unusually strong in Marperger's publications, those above-mentioned are not available, and I had to rely on the presentation by Bruno Zieger, "Handelschulen" in W. Rein, ed., *Encyklopädisches Handbuch der Pädagogik*, 2d ed., IV (Langensalza, 1906), 6-8. Marperger's contribution is also mentioned in the article "Handelshochschulen" by H. Raydt in *ibid.*, III (1905), 959, and Max Apt, *25 Jahre im Dienste der Berliner Kaufmannschaft* (Berlin, 1927), 169.

⁹ The plan was published at least three times: *The Merchant's Public Counting-House: or New Mercantile Institution . . .* (London, 1750) [a second edition of 1751 is in the Goldsmith Library in London]; *The British Mercantile Academy: or the Accomplished Merchant . . .* (London, 1750); finally it is to be found in the article "Mercantile Accountants" in *The Universal Dictionary of Trade and Commerce*, both in the first edition of 1754 and the second of 1757, II, 210 ff.

of apprentices and convinced, as many far-seeing men were to be after him, of the national importance of an enlightened merchant class, he was planning to establish high-level mercantile education. To be sure, he did not execute his project. Teaching was to pivot around three subjects: mercantile arithmetic (foreign exchange, arbitrage transactions, usances regarding domestic and foreign bills of exchange, foreign weights and measures, duties, subsidies, bounties, drawbacks, tariffs and imposts); business correspondence with emphasis both on grammar and style; and accounting. Lessons on these main subjects were to be supplemented by attention to world trade and commerce, to enable the students later in their lives to shift if necessary from one line to another; by language teaching; and by instruction in geography. In the evenings Postlethwayt was planning to organize what might be called *colloquia* on business subjects, to train the students in free speech and discussion and at the same time assist them in clarifying their minds on what they had learned. His real goal was to make young businessmen *understand* what was going on in a contemporary counting house. Originally, theoretical business instruction was to be capped by making the students actually run a business of their own, as Brewster had suggested before,¹⁰ but this scheme was quickly abandoned on the advice of experienced merchants. What was retained was the suggestion that students conduct a tactful correspondence with great mercantile enterprises on their policies and procedures.

From our point of view we have to ask: can Postlethwayt's plan be subsumed under the head of "academic education of businessmen"? Like Marperger, Postlethwayt carried his suggestion far beyond what was accepted practice, aiming at the highest possible level of instruction of future businessmen. But in contrast to the former he was not articulate as to the academic character of the education which he proposed, except that he used the expressions "academy" and "college." When one reads the list of potential students, one is inclined to answer the question in the affirmative. On the other hand, the minimum requirement of admission, the three R's, does not make it appear that a high level of instruction could have been reached. At any rate, Postlethwayt thought of training independent merchants, not merchants' clerks. Let us give him the benefit of doubt and consider him as one of the earliest exponents of academic instruction of businessmen. Similar doubts will accompany us also with regard to later cases to be studied as we go

¹⁰ See Footnote 5.

along. In view of the wide dissemination of Postlethwayt's plan it is quite possible that at some time it came to the attention of Büsch, to whose achievement we are going to turn shortly.

While the German and English economists were only planning and making suggestions, the Portuguese statesman Pombal was powerful enough to take action. He established in the *Aulo do Commercio* at Lisbon what was the very first school of commerce, in fact a public institution. The measure was one of those taken by the great statesman to counteract the country's commercial setback after the earthquake of 1755. The action was all the more important since Portugal lacked trained merchants and had to import clerks from Genoa and Venice to overcome the deficiency. The school, under the supervision of the *Junta do Commercio*, taught all branches of what in the eighteenth century were called the commercial sciences, as well as navigation, and it attracted a good many students. Two hundred pupils participated in 1775 in the annual public examination.¹¹

Less successful than Pombal was Johann Georg Büsch, also a "doer" like the former. He had studied theology and later became a teacher of mathematics at the Hamburg *Gymnasium*. During that period of his life he had associated with merchants and taken an amateur's interest in economics. He actually was and must have been known as an excellent educator. Otherwise it would not be understandable that his advice was solicited when in 1767 the merchant Friedrich Christian Wurmb, who had temporarily been in Prussian government service and was then doing business in Hamburg, decided to establish a commercial academy,¹² with which he intended to make money. It actually opened in 1768 with a curriculum and an organization devised by Büsch, who might have been familiar with Marperger's and Postlethwayt's earlier suggestions. The teaching was entrusted to a former merchant who had not been successful but was considered well informed, and with some additional help courses were offered on business technique (*Handelswissenschaften*), languages, arithmetic, accounting, and modern history. Moreover, the owner alternatingly took pupils into his office to give them a practical insight into the running of a busi-

¹¹ John Athelstone Smith, *Memoirs of the Marquis of Pombal* (London, 1843), I, 305. The Société de Géographie de Lisbonne published in 1879 a paper *L'Enseignement commercial en Portugal* which is not accessible to the author.

¹² Wurmb founded later a similar academy in Sweden; see Johann Georg Büsch and C. D. Ebeling, *Handlungsbibliothek*, II (Hamburg, 1789), 318 ff.

ness. This measure was not appreciated mainly because it interrupted the regular teaching schedule, but possibly also because Wurmb treated the boys as help rather than students. In the winter of 1771-72 the school had no more than twelve pupils, the founder — a bankrupt in 1771 — had withdrawn, and it was on the point of being abandoned. At this unpropitious moment Büsch took over and proceeded on his own account and risk. He was moderately successful, and by 1778 a total of 159 students had been or were being educated at the institution. The school originally was called *Hamburgische Handlungs-Akademie*, to which title it returned after having been styled for a time in the 1770's the *Hamburger Institut zur Erziehung und Vorübung des jungen Kaufmanns*. This name reads like a program, promising both general education and technical training, and it pointed to the future. As "*Büschesche Handelsakademie*" the boarding school was widely known to contemporaries.

The students — thirty to fifty at any one time — came to him from all parts of Europe and from some of the European colonies, usually at an age between fifteen and eighteen years. They were kept under strict discipline in the school building which Büsch had erected in a yard behind his house. Just as in contemporary mercantile enterprises the owners, their families, and employees took meals at one table, so here did teachers and students. Büsch and two full-time instructors, besides a few additional helpers, ran classes from eight in the morning to eight in the evening. Three hours were left for relaxation at lunch time, and hardly any student would ever have been outside of the classroom for more than one hour. The following subjects were taught: current political history, history of commerce, commercial geography, arithmetic and mathematics for business (the latter being the advanced course), technology, *Warenkunde* (i.e., the knowledge of commodities), languages (German, French, English, Italian and the rudiments of Dutch and Spanish).¹³ The most important courses have not been mentioned so far. There was a seminar on business correspondence. Business technique was also taught, seminar fashion and with the help of a rudimentary case method, in connection with accounting and cost

¹³ Language teaching was very expensive. Since the pupils came from many countries they possessed a very different degree of knowledge in the various tongues. But the teaching was such that everybody was trained according to his individual linguistic development. Incidentally, in 1789 the school lost its character as a boarding school. Thereafter Büsch restricted its task to mere teaching.

computation. The operations of a fictitious going concern were studied and entered into various account books, which were balanced every so often. Büsch's aim was not the education of business leaders but of business technicians; he used the term *Kontorist*.

Büsch, assisted by Christoph Daniel Ebeling (1741-1817)¹⁴ ran his academy until his death in 1800, after which it was dissolved, having educated a total of some 360 pupils. During those years Büsch also became a well-known economic writer, aligning himself with the Mercantilist school, whose teaching he dispensed in his courses. These were originally based on Carl Günther Ludovici's *Grundriss eines vollständigen Kaufmannssystems . . .*,¹⁵ the belated German counterpart to Savary's *Parfait Négotiant*. Later Büsch was influenced by Sir James Steuart, whose great summary of Mercantilist economics, *Inquiry into the Principles of Political Economy*, was published in London in 1765 and translated into German in 1769-1770. That it was Steuart and not Adam Smith who influenced Büsch's teaching is stressed here, because the former's great prestige with his contemporaries is easily overlooked. Moreover, one thus gets an inkling why businessmen all over the world until the middle of the nineteenth century still thought along Mercantilist lines.

It cannot be doubted that Büsch's teaching was on an academic level, although — as we will discuss later — his method was consciously not academic, since the pupils would not have been ready for advanced methods. Büsch's goal (like that of Pombal's) was the filling of a gap in his country's educational system, a gap which according to his opinion could not have been filled by an expansion of university teaching. The latter appeared to him too remote from business life.

A few words about the discipline at Büsch's school will be worth while since it reflects eighteenth-century mercantile spirit. No pupil was permitted to leave the grounds without permission, except on Thursday afternoon and Sunday, when he was free to do so provided his destination was approved. Music and dancing lessons were available and the students could have fencing instruction at certain hours of the day. The permission was granted, however, only to young men on whom it could be expected "that this bodily

¹⁴ See the article on Ebeling in the *Allgemeine Deutsche Biographie*.

¹⁵ Ludovici's book appeared first in 1756. Ludovici (1707-1778) was the son of a Leipzig professor and a professor himself, trained in philosophy and theology. See Rudolf Seyffert's introduction to the facsimile reproduction of the second edition of the *Grundriss* (Stuttgart, 1932).

exercise would have no detrimental effect." Bowling, chess and a few similar games, and card playing with open doors for small stakes were also allowed. Pupils received pocket money, the amount of which was set by the parents, and they had to account for it "in order to inculcate thrift and good order which are so extraordinarily important for the merchant."¹⁶

* * *

The four earliest steps toward an academic education for business so far described are of the greatest interest, not only because they were the earliest steps, but also because they point to a basic organizational problem which we will meet time and again. As the description shows, there were from the outset two alternatives: (1) widening the university curriculum, as envisaged by Marperger, so as to include what was then called the commercial sciences (*Handelswissenschaften*), or (2) establishing independent institutions for high-level instruction of future businessmen, as planned or actually done by Postlethwayt, Pombal, and Büsch.

Before the eighteenth century closed, not only the second but also the first alternative had been practiced, albeit for a few years only, at the *Hohe Karlsschule*. Founded by Duke Karl Eugen of Württemberg, this institution was dissolved at his death in 1794, so that the achievement had no time to mature. However, in 1789 one Johann Nikolaus Müller unsuccessfully urged the University of Göttingen to establish courses in the commercial sciences. By 1800 Marperger's dream had come true at the University of Würzburg, and it might be noted, parenthetically, that commercial courses were introduced at King's College, London, in 1852, and at some Belgian universities and at the University of Zürich by 1900.¹⁷

¹⁶ Johann Georg Büsch, *Umständliche Nachricht von der Hamburgischen Handlungs-Akademie* (1778), cited from *Sämtliche Schriften*, XII (Wien, 1816), 389 ff.; *idem*, *Über den Gang meines Geistes und meiner Tätigkeit* (1794) cited from *ibid.*, XV (Wien, 1817), 314 ff.; *idem*, *Erfahrungen*, IV (Hamburg, 1794), 270 ff.; *idem*, *Abhandlung von dem Geldsumlauf . . .*, II (Hamburg, 1780), appendix, 579 ff.; Büsch and Ebeling, *op. cit.*, 323 ff.

Secondary sources are: J. Classen, *Die ehemalige Handelsakademie des Professors J. G. Büsch und die Zukunft des akademischen Gymnasiums in Hamburg* (Hamburg, 1865); Wilhelm Stieda, "Zur Geschichte der Hamburgische Handlungsakademie" in *Zeitschrift des Vereins für Hamburgische Geschichte*, XV (1910), 1 ff.; Zieger in Rein, *op. cit.*, IV, 12, 13; Richard Ehrenberg, *Dankschrift über die Handelshochschule . . .* in Deutscher Verband für das kaufmännische Unterrichtswesen, *Veröffentlichungen*, IV (Braunschweig, 1897), 23 ff. (in future this item will be cited as Ehrenberg-Memorandum).

¹⁷ Ehrenberg-Memorandum, 17-19, 20, 23. [Continued on page 45.]

It may be said in passing, that in the eighteenth century the difference between commercial education on the high school and academic levels had not as yet been clearly recognized. The borderline was still fluid, as one can see when one studies both contemporary plans and the programs of existing schools.

CRYSTALLIZATION OF BASIC PROBLEMS

It appears advisable to return for a few more moments to Büsch's academy and to show it in a wider framework. Such a presentation will help us to understand the next step in the development. It was sparked by educators, more correctly by certain eighteenth-century educational innovators, who were the first to take an interest in the teaching of *useful* subjects. In this context commercial courses came into German high school curricula, i.e., those of the so-called *Bürgerschulen* or *Realschulen*.¹⁸ The great educator Johann Bernhard Basedow (1723-1790) took much interest in education for commerce and included pertinent courses in the program of his then famous school in Dessau, commonly known as the *Philanthropin*. Büsch's academy ties into this educational trend; as a matter of fact, Basedow and Büsch corresponded with one another, the latter advising the former. On the other hand, the attitude of contemporary businessmen explains why Büsch was only moderately successful, despite the excellence of the training which he offered. At the same time it explains why his academy was not copied more often than it actually was and why, instead, commercial high schools were founded elsewhere. *There could be no*

As to the teaching of the commercial sciences at the *Hohe Karlsschule* at Stuttgart, see Robert Uhland, *Geschichte der Hohen Karlsschule in Stuttgart, Darstellungen aus der Württembergischen Geschichte*, No. 37, ed. Württembergische Kommission für Landesgeschichte (Stuttgart, 1953), 149, 150, 238 ff.

The booklet by R. Beigel, *Die Notwendigkeit eines Lehrstuhls der Handelswissenschaften an den Universitäten* (1893) is not available in the United States.

Prussia, Abgeordnetenhaus, *Sammlung der Drucksachen, Anlagen zu den Stenographischen Berichten*, 20. Legislaturperiode, I. Session, 1904/5, Drucksache 142, Vol. IV, 2205.

In Belgium a business school was attached in 1898 to the law faculty of the Universities of Gand and Liège and in 1899 to the University of Louvain. See Institut Supérieur de Commerce St.-Ignace [Antwerp], *Notice Historique*, mimeograph, 1952 (?), received through the courtesy of Adriaen Taymans, S.J., presently director of the school.

¹⁸ By the way, information on the early teaching of economics in Germany is to be found in Wilhelm Roscher, *Geschichte der National-Ökonomik in Deutschland* (München, 1874), 471-72.

growth of academic training for business as long as businessmen insisted that would-be merchants must become apprenticed at an age of fourteen or fifteen years and stay in business thereafter. Contemporary businessmen held, moreover, that academic training would make young men haughty and therefore unfit to rise in commerce. It is amusing that these same arguments were repeated as late as 1900 by the German and *mutatis mutandis* American opponents of an academic education for businessmen. Eighteenth-century critics of Büsch's aims pointed out that his few students were either the sons and presumed successors of wealthy merchants, youngsters who did not have to struggle and compete in order to rise, or young men who wished to acquire language training.

Limited as was Büsch's success at Hamburg, his institution, as indicated above, became in a few cases a source of influence and a model. It has been mentioned before that he inspired Basedow, and to Büsch's leadership can also be assigned the establishment of a state-owned commercial academy in Vienna. On request of Empress Maria Theresa he submitted a plan, on the basis of which the school called the *K. K. Real-Handlungs-Akademie* was brought into existence in 1770. It was under the guidance of one Johann Georg Wolf, who since 1760 had been promoting commercial education and who in his new position developed Büsch's plan. The curriculum was very similar to that at Büsch's academy. The students entered the school at ages of between fourteen and twenty years, and the teaching can be characterized as of an academic character, although this was lost in 1804.¹⁰

Büsch's influence can equally be discerned in another eighteenth-century venture started by one Johann Michael Friedrich Schulz (born in 1753). Schulz had been a teacher of the commercial sciences at Basedow's school in Dessau and meant to establish in Berlin a mercantile academy along Büsch's lines. But opposition of the type described above forced him in 1791 to found a specialized commercial high school instead, educating pupils aged eight to fifteen years. But his school at least tended toward an academic institution. Schulz wished to educate not only merchants but also teachers of the commercial sciences for commercial high schools. He also offered private lessons to businessmen, especially on double-entry bookkeeping which was becoming generally accepted at that time. However, his venture became a failure: the authorities did

¹⁰ Zieger in Rein, *op. cit.*, IV, 13, 14. The original sources cited in the article are not available in America.

not back it, the time was not ripe, and Berlin business was not sufficiently advanced for the city to become the location of such a school. Since it was not strictly academic, its fate and the personality of the founder do not interest us. Yet repeated attempts to save the Schulz institution and its transformation into a state-supported school in 1803 led to discussions which brought out still more of the fundamentals of an academic education of businessmen.

At the time when the school came under the control of the Prussian government, the education of future merchants and that of future manufacturers was combined, a combination which foreshadowed the modern one in which schools of business are attached to institutes of technology. But the attempt came too early. Even so great an organizer and far-seeing official as was the Staatsrat Gottlob Johann Christian Kunth (1757-1829) could not make the plan work, although he took a great interest in the school between 1803 and 1806 when it collapsed.²⁰ Moreover, throughout the fifteen years during which the institution existed the question was argued back and forth whether it should combine general education with specialized training for commerce (or later for commerce and manufacture) or restrict itself to the latter. Schulz took decidedly the former, Kunth the latter stand. Finally, at a late moment in the school's short history it was suggested that it be merged into a *Gymnasium* or, better, be engrafted thereon as a special branch. That is to say, on the high school level one aimed now at the very goal that had been first in Marperger's mind, namely, training for business combined with education for the professions. Thus Marperger's old organizational idea was first being debated and there was the further controversy over the question of general education of businessmen versus specialized training. In 1806 Schulz himself in a clever paper urged the inclusion of commercial sciences in university curricula. Yet, disappointingly, such courses were to be reserved for future jurists and government officials and not for merchants.²¹

• • •

²⁰ Kunth is well-known to German historians as one of the early promoters of Prussian commerce and manufacture and of education for the coming industrial age.

²¹ Hermann Gilow, *Das Berliner Handelschulwesen des 18. Jahrhunderts* (Berlin, 1908), in *Monumenta Germaniae Paedagogica*, XXXV, *passim*, and especially 49, 59-60, 68, 70-71, 80, 154, 172, 173, 188, 193, 194, 197, 233-34; Friedrich Goldschmidt and Paul Goldschmidt, *Das Leben des Staatsrats Kunth*, 2d ed. (Berlin, 1888), 31 ff., 380-62. See also Oskar Simon, *Die Fachbildung des Preussischen Gewerbe- und Handelsstandes im 18. und 19. Jahrhundert* (Berlin, 1902), 691 ff. Schulz's paper "Über handlungswissenschaftlichen

To sum up and repeat, by the beginning of the nineteenth century the possibility of an academic education for business was established. The oldest of the basic questions involved, independent academic training for business versus its inclusion in the university curriculum, was not only clearly stated but was also in the process of refinement. The combination of education for business with engineering training, besides its incorporation into university instruction, was looming over the horizon. Moreover, a second basic problem was now coming up in the discussion: was a specialized training for business sufficient for the future merchant or should it go hand in hand with more or less of a general education? Not as yet seen was the possibility of training *leaders*, the goal being exclusively that of training *technically* efficient merchants.²² The curricula of the period, worked out both for academies and high schools along the lines introduced by Büsch, were surprisingly satisfactory even by modern standards. I would ascribe this situation to the work of the early writers on business, such as Savary, Ludovici, Leuchs, and others.²³

THE NINETEENTH-CENTURY GERMAN SCHOOLS

After hopeful eighteenth-century beginnings, the education-for-business movement in Germany did not at once fulfill its early promise. To be sure, in 1841 no less a person than the poet Ferdinand Freiligrath, characterized as a "writer, formerly employed in several commercial enterprises," suggested the establishment of an academic business school in Berlin. He was turned down by the elders of the Berlin commercial community, who maintained that such training undermined the institution of apprenticeship; what businessmen needed was a good general education and not the mere transmittal in schools of needed skills.²⁴

The nineteenth century was well advanced²⁵ before another serious proposal was launched in Germany aiming at academic

Unterricht auf Universitäten und Schulen" is to be found in *Braunschweigisches Magazin XIX bestehend aus wöchentlichen gemeinnützigen Anlagen zu dem zwei und sechzigsten Jahrgange der Braunschweigischen Anzeigen für das Jahr 1806*. 30. und 31. Stück, cols. 465 ff. A photostat of the item is available in Kress Library.

²² See above page 43 and Gilow, *op. cit.*, 156, 172.

²³ For examples of curricula see *ibid.*, 52, 115, 190-91, 212-13, 281, 286 ff., 315 ff., 327.

²⁴ Jastrow, *Kauffmannsbildung*, 15.

²⁵ For the following, see "Denkschrift über die Gründung einer Handels-

teaching of businessmen. As a matter of fact, this proposal was made by one of the greatest business leaders which the country ever produced, Gustav von Mevissen (1815-1899). Mevissen started his pertinent memorandum by bemoaning the fact that German *Unternehmer* (a word which stands for independent or leading businessmen) were not academically trained. The institutes of technology, then already in existence, had failed to do so, concentrating on the training of engineers and neglecting economic and historical subjects; and universities were not considered appropriate training grounds for future business leaders by fathers, who were afraid of a detrimental effect upon their sons of academic freedom. (We now understand better the strict discipline which Büsch introduced at his academy.)

Mevissen's dissatisfaction with the educational background of German businessmen implied criticism of the practical training programs of the day. Actually, on the lower level, that of merchants' clerks, educational standards were pitifully inadequate.²⁶ We should note that the potential supply of businessmen was neglected. Few had gone through the *Gymnasium* or its equivalents, and if so they had stopped before finishing what we would call a high school education. Most of them had attended only the *Volks-schule* which can roughly be compared with our grade school. Neither type of schooling had given them a rounded education, let alone a training which would facilitate professional advancement. Additional instruction in what came to be established under the name of continuation schools (*Fortbildungsschulen*) did not exist at the time when Mevissen made his suggestion.²⁷

hochschule in Köln zum 11. Juni 1879" printed in Joseph Hansen, *Gustav von Mevissen, ein rheinisches Lebensbild* (Berlin, 1908), II, 627 ff.

Mevissen's low opinion about contemporary education for business is confirmed by Arnold Lindwurm, *Die Ausbildung zum Handelsstande, Gedanken eines Kaufmanns* (Bremen, 1881). Anticipating Mevissen by about two decades, Lindwurm recommended a better general education for businessmen, pivoting around political economy. They should attend academic institutions, such as agricultural colleges or institutes of technology, to be built up to suit the needs of business. It is not clear if Lindwurm thought of education at the existing universities also, but he made it clear beyond doubt that he abhorred vocational secondary schools for future businessmen. See especially, pages 85 ff.; [the item is available at the library of the University of Michigan].

²⁶ See Friedrich Goldschmidt, *Die sociale Lage und die Bildung der Handlungshelfen* (Berlin, 1894), 8 ff.; and for a French presentation of the subject, P. Astier and I. Cuminal, *L'Enseignement technique industriel et commercial en France et à l'étranger* (Paris [1908]), 6 ff. Although it deals mainly with industrial apprentices, it is representative of a whole contemporary literature on the crisis of the institution of apprenticeship.

²⁷ *Fortbildungsschulen* are part-time schools the attendance of which is

Yet Mevissen in his condemnation of contemporary education for business did not even think in terms of a neglected reservoir of potential businessmen. He thought of the sons of rich merchants, the coming generation of business leaders. He considered apprenticeship an unsatisfactory training method for these men. As a matter of fact, we should recall that up to the nineteenth century apprentices and young clerks were mostly used for copying outgoing correspondence into letter books. This was good training for a quick and independent mind capable of absorbing the content of the correspondence. But copying letters was no adequate educational tool for slow minds and characters which must be goaded into action. The bad situation deteriorated further when, by the end of the nineteenth century, the pressure of big business had become such that successful businessmen had no longer the time to look after their apprentices. In the worst cases, apprenticeship, supposed to be a practical instruction in business skill and the transmittal of business knowledge from the old to the young, became a legalized system of exploiting juvenile labor. At best, so Mevissen thought, the young men learned to run an established business along traditional lines, but their outlook was not widened enough to make them see the possibilities of innovation. Moreover, moving in wealthy circles from the very beginning of their careers appeared detrimental to him. *To sum up, Mevissen did not recognize that it was the industrial era with its enlarged demand for new types of business leaders which had made traditional mercantile training obsolete.* But while he did not understand the etiology he knew the remedy.

There was still a second set of problems which disquieted Mevissen; and in this respect he struck a note first sounded by Marperger. The problem was to play a role in the discussions when two decades later academic instruction of future businessmen was to move into the center of interest. Unsatisfactory education of businessmen created a gap between them and the rest of the upper strata of the population whose education was very much better.

obligatory for all teen-agers who leave school prior to their eighteenth birthday. They are geared to the educational need of apprentices in commerce and industry.

Kuratorium der "Kaufmännischen Forthbildungsschulen zu Berlin," *Die kaufmännischen Forthbildungsschulen zu Berlin, Übersicht . . . , Festschrift zur Feier des 10 jährigen Bestehens der Anstalten am 1. Oktober 1895* (Berlin, 1895); Frederic Ernest Farrington, *Commercial Education in Germany* (New York, 1914); *idem*, "Commercial Education in Germany," in *School and Society*, III (1916); Die Korporation der Kaufmannschaft von Berlin, *Festschrift zum hundertjährigen Jubiläum am 2. März 1920* (Berlin, 1920), 392 ff.

To be sure, Mevissen did not recommend attending a university. Traditionally the latter stressed pure knowledge while the businessman needed to be trained in the application of knowledge. Thus like Pombal and Büsch, Mevissen came to aim at filling a gap. But filling a gap now meant both *better general education and better training for business at the same time*. The two possible goals of an academic teaching of businessmen, which had been brought out so clearly in the Kunth-Schulz controversy, were here for the first time combined in one plan. This must be kept in mind if one wants to understand the next steps of the development.

The combination of the two goals is, of course, reflected in the curriculum which Mevissen suggested and which contained different, clearly distinguishable, elements (a comparison with Büsch's curriculum is worth while): First, there were the traditional commercial sciences: accounting and business correspondence, *Warenkunde*, business technique, and business administration. Secondly, a rounded-out set of economic lectures was to serve as the background for the special training; it included courses on basic economics, statistics, public finance, money and banking, transportation, insurance, and commercial geography. Thirdly, commercial and maritime law and the law of bills of exchange were to be taught. Fourthly, this very broad education for business was to be supplemented by the teaching of general and colonial history, on the one hand, and science and mathematics, on the other. Courses in philosophy, literature, and fine arts were to complete the general education of the students, the business leaders of the future.

As early as 1879 Mevissen backed up this proposal by establishing a foundation, the capital of which, including real estate and an amount left at his death in 1899, ultimately amounted to about 750,000 marks. Under the clauses of the original document a school of business administration was to be established when the sum of 1,000,000 marks had been accumulated. An attempt to set up the institution as early as 1893 failed for lack of interest on the part of the provincial Diet. Yet by voting a capital contribution of 260,000 marks, the City of Cologne made the Mevissen foundation reach the 1,000,000 goal, though not in time to see within its walls the first modern German academic school of business. The Cologne *Handelshochschule*, to be discussed in detail shortly, opened its doors at the beginning of the summer semester of 1901.

In the meantime, however, Cologne had been overtaken both by Leipzig and by Aachen, where in 1898 academic education of future

businessmen was attached to the university and the institute of technology, respectively. That is to say, in Leipzig Marperger's first idea was realized, while in Aachen the corresponding idea of Kunth's was employed. Yet at neither place were the basic concepts embodied in a satisfactory form.

The development toward an initial success in Leipzig, limited as it may appear today, was sparked by the German Association for Mercantile Education (*Deutscher Verband für das Kaufmännische Unterrichtswesen*), founded in 1895. Coming at the right moment, this organization succeeded in building up a genuine movement. Actually all German academic schools of business were founded between 1898 and 1920, i.e., practically within two decades.²⁸ Yet the German development did not stand by itself, but was part and parcel of a western trend in education.

A short time after its foundation, the new association decided to investigate whether academic instruction of future businessmen was needed and if so on what basis. Richard Ehrenberg, then still the secretary of a chamber of commerce, was charged with the execution of the project, which thereby came into the hands of an unusually able man. Ehrenberg (1857-1922) was soon to become a professor of economics, one of the founders of modern business history, a most reliable researcher on whose work in some fields one can still rely today, and the administrator of the literary inheritance of the great German economic theorist, Heinrich von Thünen. Ehrenberg's report, one of the best sources on the beginnings of the movement, indicates his insight into the possibility of making business technique and organization the subject of scientific research. Thereby he discovered the fundamental reason why academic education of future businessmen is not only possible but also feasible. The basic problem was thus correctly seen and could be correctly tackled, as is indicated by the ultimate results.²⁹ On the other hand, Ehrenberg seems to have overestimated, as was common at the time, the role of economics in the teaching of future

²⁸ The problem of an academic education of businessmen, as it appeared to contemporaries after it had become an established fact, i.e., in the early twentieth century, was brought out in Germany by Karl Thiess in "Hochschulbildung für Unternehmer" in *Schmollers Jahrbuch*, XXXVIII (1914), 43 ff.; and in America by Charles F. Thwing, *Collegiate Training and the Businessman* (New York, 1904).

²⁹ Deutscher Verband für das Kaufmännische Unterrichtswesen, *Veröffentlichungen*, Vols. III, IV, VI (34-86), VII (Braunschweig, 1897, 1897, 1897, 1898). Vol. IV contains Ehrenberg's *Gutachten*, cited above in footnote 16; see especially 10-13, 53, 54.

businessmen. The original curricula of the London School of Economics and Political Science, to be discussed later, do not seem to me to warrant its characterization as an academic business school, but Ehrenberg considered it a model for the German *Handelshochschulen* to be established. At the same time, he also looked to the Wharton School in Philadelphia as a model.

Under the spur of the movement launched by the above-mentioned association, academic education for businessmen was set up in Leipzig. The educational problem was thus being faced, but one can hardly characterize it as even near to solution when the original Leipzig arrangement was put into effect at the beginning of the summer semester of 1898. Actually, the approach chosen was not the result of discussions of such fundamentals as whether an academic business school should be attached to a university or an institute of technology or whether an independent organization was preferable. The outcome was rather due to local conditions. There existed in Leipzig a business school on the high school level, the *Öffentliche Handelslehranstalt*. Founded in 1831 by the Leipzig merchants' guild (the *Kramerinnung*) it had been taken over in 1887 by the Chamber of Commerce. The director of the school, one Hermann Raydt, took the initiative and brought together at one table representatives of the Leipzig university, the chamber of commerce, and the Saxon government. The result of the negotiations was that young businessmen answering certain minimum educational requirements and after having completed their regular apprenticeship would be permitted to attend certain lectures on economics, law, economic history, and economic geography at the university.³⁰ The Leipzig commercial school would on its premises give a training in mercantile arithmetic; in accounting; in business correspondence (in German, French, and English); in some other languages; in the elements of technology; and in stenography and typewriting. The intention of this unpromising program was to educate a business *élite* and commercial teachers besides, for whom extra courses at the university and school were made available. The goal was good intellectual training in addition to general and commercial education. One readily sees that the emphasis lay on general education; this one of two possible goals was being overstressed.³¹ Looking in re-

³⁰ Somewhat similarly, by 1900 the Swiss cantons Bern and Zürich permitted graduates of their commercial high schools to attend courses in economics and commercial law at their universities.

³¹ Hermann Raydt, *Zur Begründung einer Handels-Hochschule in Leipzig*, Denkschrift im Auftrag der Handelskammer zu Leipzig (p.p., Leipzig, 1897),

respect at the Leipzig arrangement of 1898, one will not find it impressive. It did not amount to much more than permission for certain pupils of a specialized mercantile high school to sit in on a few university courses.

Somewhat more impressive was the two-year course in the commercial sciences (*Zweijahr-Kursus für Handelswissenschaften*), established first in the winter semester of 1898 at the Aachen Institute of Technology. These courses represented an experiment only, abandoned after ten years in 1908; from then on what remained of the program was used for broadening engineering students.³² When it started, the Aachen arrangement was in one respect a step backward in that only young men meeting the standard educational requirements for admission to universities could participate, whereas in Leipzig, as later in Cologne and Berlin, the schools were open to young businessmen with the lesser, although then customary, educational background. In line with Mevissen's ideas and the Leipzig program, the Aachen department's avowed goal was the training of business *leaders* for commerce and industry. The emphasis was not to be on economics or technology or mercantile skills but rather on business as a science.³³

Awareness of the shortcomings of the Leipzig and Aachen attempts enables us to appreciate the progress which was achieved, when, in the summer semester of 1901, the Cologne *Handels-Hochschule* came into existence.³⁴ Then and there German academic

4, 6, 7, 9, 11 ff.; *idem*, in Rein, *op. cit.*, III, 960 ff.; "Ordnung für die Handels-hochschule in Leipzig" (reprint from its first annual report) in Max Apt, speech of 1900 (see footnote 41), 48-55; Hooper and Graham, *op. cit.*, 88 ff.

³² Wilhelm Kähler, "Die Auflösung der Aachener Handelshochschule" in *Zeitschrift für Handelswissenschaft und Handelspraxis*, I (1908/09), 171, 172.

Incidentally, commercial courses were taught during the nineteenth century temporarily at the institutes of technology at Braunschweig, Karlsruhe, Vienna, and Riga; Ehrenberg, *op. cit.*, 29.

R. Beigel's *Vorschlag zur Erweiterung der Technischen Hochschule zu Karlsruhe durch eine Abteilung für Handelswissenschaften* (1895) is not available in this country.

³³ Hermann Lehmann, "Die handelswissenschaftlichen Lehreinrichtungen und die Studienstiftung für Wirtschaftsingenieure" in Paul Gast, ed., *Die Technische Hochschule zu Aachen 1870-1920 . . .* (Aachen, 1921), 379 ff.; Raydt in Rein, *op. cit.*, III, 964; Simon, *op. cit.*, 895 ff.

³⁴ A detailed survey of the beginnings of the *Akademie für Sozial- und Handelswissenschaften* at Frankfurt (starting in the Winter Semester of 1901) cannot be given, since the primary source material, such as the early annual reports of the *Rector*, is not accessible. Yet I do not think that this is a real gap, since the school's goal was much wider than the training of businessmen. It was meant to be, and actually was, the nucleus of the present University of Frankfurt. [Continued on page 55.]

education for business outgrew its swaddling clothes. The success of the Cologne school as an independent institution devoted to training for business was significant in contrast with the earlier efforts to link such training with a university and an institute of technology.

Two aspects of the Cologne program are of particular interest in our context: motives and goals, on the one hand, and the curriculum, on the other. The ultimate goal was the education of a business *élite*, since traditional mercantile education had broken down. Yet the phrase "education of a business elite" must be correctly understood. It was clearly recognized that what one may call the indispensable innate capacities of a business leader could not be implanted in a man who did not possess them. But at Cologne it was felt that a born businessman could be developed faster and better by the systematic training of his intelligence and the transmittal of certain useful information than would be the case were he left to his own devices. Especially, it was recognized that business leadership in the twentieth century would depend on insight into the working of the world's economic life. Consequently, the goal was to give young men that insight at an age at which they were still able to profit from theoretical instruction. The Cologne school wished to develop their ability to observe and to draw conclusions from observation, so that they could make decisions on the basis of knowledge rather than hunches. No doubt this goal was a good one, entirely in line with the demands of the coming age. In addition, since the businessman's importance in society was rising, a broad general education, rather than the traditionally narrow one, was demanded for him.

These ends, then, were to be achieved by a specially devised training program. Cologne correctly pointed to the advantage of its independence, for it could restrict itself to such courses as were demanded by future business leaders and, on top of that, could teach them in such a way as was required for the particular purpose at hand. This held true especially of the courses in economics and

The combination of two different educational goals (the training of business-men and improved education in the social and political sciences) in one independent school was the result of a merger of two movements, seen possible because the same combination was supposed to have been achieved earlier in the Ecole Libre des Sciences Politiques in Paris and in the London School of Economics. See Zieger in Rein, *op. cit.*, IV, 965; Simon, *op. cit.*, 894, 904 ff., and the nonaccessible *Berichte* of the *Rector*, especially the one for the two academic years 1901-1903 (Jena, 1903).

law. On the one hand, it was possible to relax the customary university requirements. As to law courses, for example, the moot aspects of legal rules were uninteresting, and emphasis had to be laid on what was generally recognized as binding and thus the basis of businessmen's daily routine. On the other hand, say in the study of the economics of insurance or transportation, one could and would go beyond what was taught at the university.

Instruction was offered in six departments: (1) economics; (2) law; (3) geography, study of materials (*Warenkunde*), science, and technology; (4) business technique; (5) languages; (6) general education (*Allgemeine Geisteswissenschaften*). The fact that business technique stands only in fourth position, while for a modern academic school of business it would, of course, stand first, at once commands attention. And, even further removed from modern practice, only three groups of courses were originally offered in this department, namely, mercantile arithmetic (three semesters, two hours per week each plus a special course for future teachers); accounting (three semesters, two hours each); and business correspondence and office work (three semesters, two hours each). This arrangement, which appears very strange and clumsy today, is easily explained. It was taken over from the practice of the commercial schools working on a high school level.

The last-named group of courses, devoted to business correspondence and office work, was really the crucial one. This must have been recognized very soon, for studying the course descriptions in the successive programs we see it develop. The first semester course became an introductory one, the second and third semester courses were developed into discussions of the business technique of transportation, insurance, and banking on the one hand, and import and export, on the other. In the summer semester of 1903 a course was added on the business end of manufacturing, and the whole series of courses appeared first under the more appropriate term of *Handelsbetriebslehre*. Similarly, what was first taught under the name of mercantile arithmetic was developed in special classes and seminars into the study of currencies, exchange, and securities.³⁵

³⁵ *Die Städtische Handels-Hochschule in Köln, die erste selbständige Handels-Hochschule in Deutschland*, 4th ed. (Berlin, 1903), *passim*, and especially for the progressing curriculum, 74 ff.; Christian Eckert, *Die Städtische Handels-Hochschule in Köln. Bericht über die zwei Studienjahre 1903 und 1904 . . .* (Berlin, 1905), especially 75 ff.; *idem, Die Städtische Handels-Hochschule in Köln, Bericht über die Entwicklung der Handels-Hochschule im ersten*

When one examines and compares the curricula of the three early German academic business schools (Leipzig, Aachen, and Cologne), certain interesting observations can be made. In a way their teaching programs were behind that of eighteenth-century business schools both on the academic and the high school levels, for they pivoted around economics rather than business subjects. To be sure, it was not the brand of economics which is taught today at American colleges, but that very empiricistic and historical science which was generally dispensed from German platforms under this name at the time. *That is to say, in their early years those academic business schools broadened the outlook of future businessmen, but they did not give them a thorough training on the highest possible level in business technique and business administration.* Disappointment of the students, on record at Cologne, is understandable and was justified. Yet the reason, appearing strange today, is easily explained. Business subjects had not been scientifically investigated in the nineteenth century. What the eighteenth century had achieved in this respect was no longer helpful and up-to-date, since the mercantile age had been replaced by an industrial one. It was only in connection with the development of academic schools of business that an interest in the scientific investigation of business subjects arose, i.e., in the area called *Privatwirtschaftslehre* in Germany.³⁶ And the earliest professors to teach business subjects, such as Hellauer, Schär, and Nicklisch, were between about 1910 and 1912 also the pioneers in writing appropriate textbooks. Thus it was logical indeed that in Leipzig the famous economist, Karl Bücher, played a leading role in the establishment of the above-described institution,³⁷ and that in Cologne

Jahrzehnt ihres Bestehens . . . (Cöln, 1911), *passim*, and especially 84 ff.; Simon, *op. cit.*, 899 ff.; Rein, *op. cit.*, III, 965; Farrington, *op. cit.* (1914), 200 ff.

One may want to compare the Cologne curriculum with the "essentials" for commercial education as presented by Hooper and Graham, *op. cit.*, 27.

* During the period under investigation no one term was generally accepted to cover the scientific treatment of business technique and business organization. The eighteenth-century word *Handelswissenschaften* was becoming obsolete and the present-day term *Betriebswirtschaftslehre* not commonly applied as yet. One finds these words used synonymously, the one employed in the text, and the term *Einzelwirtschaftslehre*.

* Karl Bücher, "Die Handelshochschulbewegung in Deutschland" in *Die Entstehung der Volkswirtschaft*, 2d series (Tübingen, 1918), 351 ff.; the essay is a good critical survey of the German movement, as it stood by the outbreak of World War I. See also Bücher's address *Der deutsche Kaufmann und die*

and later in Berlin again economists were in the key positions (Schumacher, Eckert — Jastrow). Incidentally, the same holds true of the Philadelphia Wharton School, where for years Edmund Janes James and later Simon N. Patten were most influential, and of the Amos Tuck School, which was originally dominated by the economics department of Dartmouth College. It is clearly apparent that of the two possible goals of any pertinent teaching program — general education and professional training — the former was being overstressed, not by choice but by necessity. By 1900 the sound foundation for high-class professional training was still lacking.

JASTROW AND THE BERLIN SCHOOL OF BUSINESS ADMINISTRATION

This was the situation in which — originally by coincidence — Ignaz Jastrow was to assume an important role. The idea of an academic training for business was an old one, as we have seen, and that of a *Handelshochschule* for Berlin was not his. As a matter of fact, in order to understand the conjuncture, one has to hark back almost one hundred years.

Throughout the eighteenth century Berlin possessed two merchants' guilds. These lost their privileges by 1810 without being dissolved, however; and in 1820 by royal ordinance they and an organization managing the Berlin exchange were merged to form the *Korporation*³⁸ *der Kaufmannschaft von Berlin* (association of the Berlin mercantile community). The new organization was a voluntary association which, besides running the stock exchange, represented the Berlin merchants and manufacturers and had some additional functions, such as advising the courts and the government, respectively, as to trade usages, proposed legislation, customs duties, administrative action to be taken, etc. It was administered by an elected body, the *Älteste der Kaufmannschaft von Berlin* (elders of the Berlin mercantile community). By the end of the nineteenth century this association and its managing body were under fire. The latter's contacts with the rank and file of members were not sufficiently close, and the association was accused of stressing the interests of the Berlin exchange at the expense of Berlin's rising industry. Be that as it may, an important sector of Berlin busi-

Handelshochschule (Leipzig, 1910), reprinted from *Zur Eröffnung des neuen Handelshochschul-Gebäudes in Leipzig* (Leipzig, 1910), 23 ff.

³⁸ The German word *Korporation* means association or body and is not an equivalent of the English "corporation," which is in German *Aktiengesellschaft*.

ness advocated that the association be transformed into a chamber of commerce.³⁹ By 1900 the question of whether or not to make this change had become a rather hotly debated one in Berlin. Regardless of strong pressure on the part of influential bankers and industrialists, a majority of the members of the very wealthy *Korporation* decided to turn down the proposal and remain an independent voluntary association. Thereupon a chamber of commerce was established for Berlin, and the older organization lost not only its monopoly but also the active co-operation of some outstanding members who had played a prominent role in its administration. It also lost the head of its economics department, who joined the new chamber of commerce.

In the competitive situation now developing between two trade associations, the old *Korporation* had to prove its indispensability. In performing the economic side of its remaining functions it came to rely largely on the *Privatdozent* at the University of Berlin, Ignaz Jastrow, who was appointed economic adviser to the *Korporation*. Jastrow, regardless of his achievements and rather advanced age, was still a mere lecturer, partly because he had switched from history to economics, as mentioned before, but mostly because his liberal outlook was disliked by the conservatives who ruled the empire and influenced the choice of incumbents for professorial chairs. Jastrow's first action, after having taken over his new job, was the establishment of the *Berliner Jahrbuch für Handel und Industrie*, a yearbook which he edited for four years and which in the way of reporting went far beyond anything that had been issued before by trade associations or chambers of commerce. *The Berliner Jahrbuch* was for its time a great publication, truly academic in nature. But secondly, the *Korporation*, which in the 1890's had gone into the field of business education on the elementary level, now decided to establish an academic school of business administration, a *Handelshochschule*.⁴⁰

³⁹ A chamber of commerce was and is in most Continental countries, including Germany, a kind of organization very different from the one which goes under that name in America. Continental chambers of commerce are obligatory associations of all merchants and manufacturers of the district for which they are established; and besides representing their members' interests they have certain public and semipublic functions transferred to them by the government of the country in question.

⁴⁰ See *Die Korporation der Kaufmannschaft von Berlin, Festschrift zum hundertjährigen Jubiläum am 2. März 1920, passim*; Max Apt, *25 Jahre*, 21, 22, 48 ff., 91. The fundamental questions which were faced are treated in Simon, *op. cit.*, 872 ff.

Max Apt, the head of the legal department of the *Korporation*, was the one who first proposed the founding in Berlin of an academic school for future businessmen. He did so in 1900, when addressing an association of young merchants (the *Verein junger Kaufleute*). The latter took action by submitting a petition to the *Korporation*. It was shelved, however, without being considered. Yet by 1901 the ensuing discussion had advanced to the point where the *Korporation* suggested to the Prussian ministry of education that pertinent courses be introduced at the University of Berlin. Marperger's old idea was thus taken up, but the inspiration actually came from the schools at Leipzig and Aachen. The *Ministerium* did not condescend to answer. Nevertheless, forced by the unfavorable developments, described above, to go into new fields of activity, the *Korporation* went ahead and investigated vigorously the possibility of an academic training for business in Berlin.

Dr. Carl Dunker was sent to Paris, London, Antwerp, and Vienna to study business schools, as will be described in a later section of this article. Apt himself went to Frankfurt, Cologne, and Leipzig, reporting favorably on what he observed there. In this report he rejected the Leipzig plan of an academic training of businessmen at the university and suggested, instead, the Cologne scheme of an independent institution. When in 1903 a lecturer at the Frankfurt school (mentioned in passing in footnote 34) addressed the reputable Berlin *Volkswirtschaftliche Gesellschaft*, an association of citizens interested in economic questions, the president of the *Korporation* came out in the discussion in favor of an academic school of business for Berlin. Shortly thereafter the *Korporation* set aside the sum of 150,000 marks as a first installment toward the cost of the establishment.⁴¹

In the course of the preliminary steps in the organization of the Berlin *Handelshochschule* Ignaz Jastrow assumed two functions. In 1904, the year of the St. Louis Exposition, he was sent to the United States by the *Korporation*, and during this trip he studied at close range the then existing American academic business schools. His report on this subject will occupy our interest in the next section of the article. Later he wrote and submitted a memorandum which became the basis of the new school's original curriculum. Unfortunately I have been unable to locate a copy of this

⁴¹ Apt, *op. cit.*, 169 ff. See also his pamphlets *Die Errichtung einer Handelshochschule in Berlin* (Berlin, 1900) and *Zur Handelshochschulbewegung in Deutschland* (Berlin, 1907).

(probably mimeographed) document, which would have been a most important source in our context.⁴² Thus, detailed information cannot be presented as to the way in which Jastrow handled this second one of his original assignments, but he certainly was the right man for the task with which he had been entrusted. A great educator, interested in the teaching of beginners, an expert economist with practical experience in public administration,⁴³ and through his advisory activities familiar also with the needs of business, he had a remarkable understanding of the demands of the future. It was clear to him that the businessman of the twentieth century would no longer be a trader, but rather an administrator, a business bureaucrat, as we would say today.⁴⁴ On the other hand, Jastrow was among those who not only stressed, but possibly overstressed, the idea of general education for businessmen. Business schools, he felt, should not practice strictly professional training;⁴⁵ they should not become merely technical schools. Consequently, as a casual remark in an unpublished autobiographical sketch reveals, he sided with those who preferred that academic education for business be a function of the universities. That is to say, Jastrow actually put a plan into effect of which he was, at least in the beginning, somewhat critical.

Since Jastrow's above-mentioned memorandum is not available, it is impossible to say at this moment to what extent the original curriculum, as adopted, deviated from the one suggested by him. Essentially it was his. The subjects to be taught were grouped as follows: business administration and business technique; economics; elements of civil and commercial law; economic geography and economic history; pure and applied science; technology and *Warenkunde*; languages; and commercial education. Courses in the last-named subject were needed, since the education of teachers both for commercial continuation schools and for commercial subjects in general was from the outset considered one of the tasks of the new

⁴² It must have been in Jastrow's own library which was auctioned off shortly after his death and after the outbreak of the recent war. An attempt to acquire the library for the United States failed at that time. The memorandum, entitled *Denkschrift betr. die unterrichtliche Ausgestaltung der zukünftigen Handels-Hochschule der Korporation der Kaufmannschaft von Berlin* (1905), 116 leaves, is cited on page 87 of *Verzeichnis sämtlicher Schriften von Dr. J. Jastrow* (Berlin, 1929). It is also mentioned by Apt, *25 Jahre*, 200.

⁴³ Jastrow was connected as a *Stadtrat* with the administration of the City of Charlottenburg in which he lived.

⁴⁴ Jastrow, *Kaufmannsbildung*, 14.

⁴⁵ See Jastrow's trip report (as cited in footnote 64), 443.

school. In addition, there were two special kinds of courses: (1) one of an introductory character, which was offered every semester and considered most important, and (2) one-hour evening lectures on subjects of general interest. To understand the *raison d'être* of these two types of courses we have to look at the student body for which the school was designed.

Those young men who chose an elevated business career in Imperial Germany usually did not finish the medium level of education, i.e., the *Gymnasium* or equivalent types of schools. They customarily attended such schools for six years, instead of nine, and were not qualified to enter a university. Including their training on the level of our grade schools, they went to school all told for nine years instead of for twelve, as did those preparing for the professions. Then they became apprentices for three years. It was this group of young men for whom the Berlin *Handelshochschule*, like that of Cologne, was established. Those entering the Berlin school, when it opened its doors in the fall of 1906, were by the bent of their minds and in consequence of their incompletely schooled and their purely practical training in business, not able to work in a way in which German university students of the time were expected to work. In the beginning they had to be much advised and guided. It was for these boys in their late teens or early twenties that the introductory course was devised and taught by Jastrow, who thereby took up an older German university tradition which had been abandoned in the course of the nineteenth century. On the other hand, the one-hour evening courses in the field of general education were to be open to the public at large, and it was expected that they would be attended by older businessmen. Moreover, here the students were to find the general education which some of those Berlin businessmen who originally had been against the idea of a theoretical preparation for business had wished to stress.

Taken as a whole, Jastrow's curriculum was a compromise, as far as Berlin mercantile opinion was concerned. It combined general education of businessmen with instruction in business technique and business administration of men groomed for business *leadership*. To be sure, the Cologne school aimed at the very same goal, but when one compares the early Cologne curricula and that devised by Jastrow for Berlin, the achievement stands clear. Business technique and business organization for the first time appeared in the opening pages of a catalogue, which is indicative of the emphasis placed on the study of business. Christian Eckert, the Cologne

study director, emphasized the Berlin innovation, which was adopted by the younger German academic business schools at Mannheim, München, Königsberg, and Nürnberg.⁴⁶ In Berlin in the winter semester of 1907-08 courses were taught in general and special business techniques; business administration; bills of exchange; banking technique (lecture and seminar); money, credit and banking (for beginners and advanced students — lectures and seminars); the book trade; the techniques of the publishing business; an introductory and an advanced course on balance sheets (seminars included); a special course on industrial balance sheets; accounting problems; cost accounting; and mercantile arithmetic (for beginners and advanced students). Moreover, seminars were conducted for beginners and advanced students on the mercantile sciences (i.e., business technique and administration) and a colloquium on the organization and technique of the export business. Of course, it should be understood that Jastrow had the benefit of earlier attempts and experiments in Leipzig, Aachen, Frankfurt, and Cologne. The last-named school had been active in building up the department of business technique and business administration but as to the number and refinement of courses it was in 1906 not yet advanced to the point at which Jastrow made the Berlin school start. As was frankly conceded, the Cologne progress was mainly due to the fact that the incumbent professors had turned their backs to the original conception of their task. Eugen Schmalenbach was the driving force in Cologne, and today he is considered one of the great leaders in the field.

From the historian's point of view, Jastrow, by devising the curriculum for a school which he himself had not originally suggested, assumed the same role which Büsch had once assumed in Hamburg and, as we shall see, the French economist Adolphe Blanqui had played at the oldest academic school of business in Paris. Jastrow's activities can also be compared with those of the economists Eberhard Gothein (1853-1923) and Hermann Schumacher at Cologne's *Handels-Hochschule*. All these men (except Gothein) also became leading professors at the new schools. Jastrow, in so doing, did not abandon his teaching at the University of Berlin, but in his seminar combined university students with those from the *Handelshoch-*

⁴⁶ "Handelshochschulen" in *Handwörterbuch der Kommunalwissenschaften*, II (Jena, 1922), 469 ff., especially 472. The younger schools are not treated in this article since it leads up only to the Berlin and Harvard schools.

schule. It was in this seminar that the author first became a student of Jastrow.

Almost one hundred and fifty years earlier Büsch had recognized that academic instruction of businessmen could not slavishly copy university teaching methods. On the Continent, students attending academic business schools had, as a rule, not completed their formal schooling to the point where they were prepared to make the best of traditional university lecturing. Moreover, what was needed was not a mere inculcation of knowledge, but the transmittal of knowledge in applicable form and a training in the application of knowledge for business ends. A century after Büsch, Mevissen had seen the problem, as did Jastrow twenty-five years after Mevissen. His answer was an increase of seminars at the expense of lectures. Moreover, in his own seminars Jastrow also deviated from established university-seminar methods and developed his own. He used source books which he had compiled, distributing topics based on the selected sources to each two students, one of whom had to report in a ten-minute speech without the help of a written manuscript, while the other had to criticize the first and if necessary to supplement the report. There followed a general and well-steered discussion of the topic. Every participant was expected to be familiar with the subject to the extent that it was presented in the source book, while the two performing students were supposed to have gone to the original sources and to have studied the subject from all angles and in all its aspects, including those not embodied in the source book.

Studying the existing American business schools with a view to determining if they could be used as models, working out a curriculum, and teaching economics did not exhaust Ignaz Jastrow's contribution to the new school. He was, in addition, for three years (1906-1909) its *Rector*, i.e., its head.⁴⁷ The *Rector* of a German university was and is the chief administrative officer elected by the faculty for a period of one year. That he is elected — and elected for a short period only — distinguishes the German *Rector* from an American university president, his counterpart. Jastrow's presidency, if you please, represents a special case. Just as Jastrow was instrumental in building the new school's curriculum, so was Max Apt most influential in shaping its organization, although the one actually adopted was in some points different from that which Apt had

⁴⁷ Jastrow was appointed *Rector* for three years, but since his elected successor, Carl Dunker, became seriously ill and died, he had to fill the gap and carried the administrative load through the winter semester 1910/11.

suggested. Essential for the Berlin *Handelshochschule* was its character as an independent organization, which followed the pattern worked out by Büsch's *Akademie*, the Paris *Ecole Supérieure de Commerce*, the Vienna *Exportakademie*, and finally by the Cologne *Handelshochschule*. The Berlin institution, like that in Paris, was owned by an organization of the chamber of commerce type, the *Korporation der Kaufmannschaft von Berlin*, while Büsch's had been a private venture and the Cologne school was city-owned.

The difference in ownership was reflected in different administrative settings. The owner Büsch ran his school, of course. The Cologne school, like that in Paris, had an appointed director who administered it under the supervision of a body consisting in Cologne of city officials, members of the faculty, and a few others. In the Berlin school the administrative business was divided between the *Elders of the Berlin Mercantile Community* and the school's *Rector*, and for the first three years, as indicated above, the *Elders* appointed Jastrow to that position. But there was the understanding that thereafter the faculty would elect the *Rector*, as was customary at German universities. However, the *Rectors* of the Berlin *Handelshochschule*, Jastrow as well as his elected successors, were, because of division of authority, restricted in their capacity as executives. It should be stressed in passing that Jastrow's main contribution in his capacity as the *Rector* was the selection of a very efficient faculty. But there was a potential source of conflict, which could not easily become dangerous as long as Jastrow was simultaneously the *Rector* of the *Handelshochschule* and the economic adviser of the *Elders*, entitled as such to participate in all their meetings. Before long, however, he gave up the advisory job against the will of the *Elders*. From conversations with Jastrow, decades after these events, I can at least surmise the reason. He once told me that whatever practical work he had done in his life was meant to serve him in his research and teaching, and I can well imagine that the job with the *Elders* lost its attraction for him, once he had learned what could be learned and it had started to become routine.⁴⁸

⁴⁸ The following material is available for the beginnings of the Berlin *Handelshochschule*: Jastrow, I., *Die Handelshochschule Berlin, Bericht über das erste Studienjahr Oktober 1906/7* (Berlin, 1908); *idem, Die Handelshochschule Berlin, Bericht über die erste Rektoratsperiode Oktober 1906-1909* (Berlin, 1909); *Handels-Hochschule Berlin, Eröffnung: Oktober 1906, Organisation und Lehrplan . . . nebst Vorlesungsverzeichnis für das Wintersemester 1906/7* (1906); *idem, Zweck und Organisation* (Berlin, 1910); [an English

Regardless of Jastrow's extraordinary merits, he left the institution in the course of a serious conflict which as such is of a good deal of interest. In Germany it was and is taken for granted that full professors have life tenure. But when the Berlin *Handelshochschule* was established, the owning merchants' association made short-term contracts with the leading men, Jastrow included. In view of the situation this was initially not an unwise policy, but it was continued even after it had become clear that the school was flourishing and there to stay. In the course of about a decade three different contracts had been made with Jastrow: the first one in his capacity as the economic adviser of the *Elders*, the second as an economic adviser, professor, and *Rector*, the third in his capacity as professor. Under the second contract Jastrow had received a salary which was very high by contemporary German standards. That salary was left to him at the contract renewal of 1909, although he had meanwhile resigned as the *Elders*' economic adviser — an action that apparently annoyed the latter, who had relied on his valuable services. Be that as it may, the contract of 1909 was, after four years, open to cancellation by either party thereto, and if cancelled earlier by the *Korporation*, the latter was to pay the amount of two years' salaries.

In the spring of 1914 the *Elders* rescinded the contract and invited negotiations for a new one. When Jastrow did not answer the letter within four weeks, they cancelled the contract by a formal document sent to him through a court of law. This is the kind of thing which lawyers do when unbridled, and when one reads the official pronunciamentos one can surmise the legal inspiration for a procedure which was not only rude but also stupid. But it indicates that Jastrow's great success had led to jealousies and that he had made himself unpopular with certain influential people. Being a

version of this item exists: Berlin Merchants' Corporation, *The Handelshochschule Berlin, Object and Organisation of the Berlin Commercial University, Report presented by . . . to the International Congress of Press Associations . . .* (Berlin, 1908)]; *idem, Ordnungen und sonstige Bestimmungen für Studierende, Hospitanten und Hörer* (available were the Berlin editions, 1911 and 1913); Korporation der Kaufmannschaft, *Festschrift*, 380 ff.; Apt, 25 Jahre, 169 ff. See also Jastrow's survey "Handelshochschule" in *Handbuch der Politik*, 3d ed., III (Berlin, 1921).

Valuable information on the early history of the German academic business schools is contained in some papers by Georg Obst: "Die deutschen Handelshochschulen," "Die deutschen Handelshochschulen im Jahre 1908/09," "Die deutschen Handelshochschulen im Jahre 1909/10," "Die deutschen Handelshochschulen 1911/12 und ihre Hauptlehrgebiet: die Privatwirtschaftslehre," all in *Zeitschrift für Handelswissenschaft und Handelspraxis*, I (1908/09), 192 ff., II (1909/10), 131 ff., III (1910/11), 174 ff., V (1912/13), 147 ff.

man of strong convictions and always unwilling to budge when he believed that principles were involved, it may at times have been hard to live with Jastrow, especially on occasions when others were thinking only in terms of compromise and expediency.

The discourteous action, to put it mildly, immediately became publicly known and created a furor. The public was shocked to learn that professors at the Berlin *Handelshochschule* did not have life tenure, so that — as was commonly believed — freedom of teaching and research were in danger. On top of that, the *Elders* had just appointed a new professor without prior advice from the faculty and thus in contrast with German university practice, with the result that the faculty was disgusted. The outcome was a students' strike, welcomed by the faculty, a strike such as was unheard of in pre-World-War-I Germany. The worst of the blunder was that it reflected on the intelligence of the businessman. Here was a businessman's organization, widely considered superfluous after the establishment of a semiofficial chamber of commerce — here was a business-owned academic business school under the supervision of the government which could interfere at any time. Here was a public opinion which did not hold business in high esteem, because of the presumed lack of culture and education on the part of its exponents. And that organization, one of the oldest and wealthiest of its kind in the country, was acting in a miserly and ungrateful fashion toward a man who for years had publicly fought the businessman's battle for recognition, and seemingly was treating its professors like low-class business employees. It appeared that the *Korporation* was unable to reward academic and administrative merit and, in general, to handle a faculty and a students' body. The conflict ended without government interference after the complaints of the faculty had been settled. But Jastrow himself, deeply offended, categorically refused to accept any new contract, and thus ended his contribution to German education for business.⁴⁹

PARALLEL DEVELOPMENTS IN NINETEENTH-CENTURY WESTERN EUROPE

In order to find Ignaz Jastrow's place in the history of academic education for business we have so far restricted our investigation to the German scene. But in the course of the nineteenth century and prior to about 1880 when the Germans again took up the prob-

⁴⁹ See the microfilms of clippings on the conflict from Berlin contemporary newspapers in Baker Library, also Apt, *op. cit.*, 283.

lem, a good many important steps had been taken elsewhere and, as has been described above, these were carefully studied in Germany. Of all educational institutions of the kind under investigation that existed at the end of the nineteenth century, the *Ecole Supérieure de Commerce*, founded in Paris in 1820 under the name of *Ecole Spéciale de Commerce et d'Industrie* was the oldest (its present name dates from 1852).⁵⁰

One can easily explain why in the early nineteenth century older ideas, especially those of Büsch, were taken up in Paris, albeit in a very different setting and not necessarily under Büsch's influence. In the eighteenth century France had been second only to England in technology, and was surpassed commercially only by England and Holland. After about 1815 the industrial revolution, so called, gained momentum in France. No country did more at the time for science and scientific and engineering training. Thus, it is not surprising to find the early establishment in Paris of academic education for business.⁵¹

To be sure, what appears to have been if not the first then at least a very early French move in the right direction can be traced to the eighteenth century. As early as 1779, the plan of an *Ecole Gratuite de Commerce* was submitted to the *Académie des Sciences et Belles Lettres* at Dijon. Its unknown author wished to raise 1,200 livres per annum and to hire two professors to teach young merchants courses in commercial and local law, accounting, commercial and industrial practices, and maritime trade. Nothing seems to have come of this proposal.⁵²

As I have tried to show, Büsch educated eighteenth-century-style merchants, and as late as about 1880 the exceedingly able Mevissen was not articulate as to why a theoretical training for business was then required. He did not see the connection between an educational gap on the one hand and the rise of the industrial age and the emergence of high-capitalism on the other. Under these circumstances it is truly remarkable how level-headed and modern the men were who in 1820 founded the *Ecole Spéciale de Commerce et d'Industrie*.

⁵⁰ Chambre de Commerce, Paris, *Notice sur l'Enseignement Commerciale organisé par . . . , Exposition Universelle de Chicago* (Paris, 1893); *idem, Ecole Supérieure de Commerce, Notice Historique. . . . Extrait du Bulletin de la Chambre de Commerce* (Paris, 1899); Alfred Renouard, *Histoire de l'Ecole Supérieure de Paris . . . 2d ed.* (Paris, 1899).

⁵¹ The Ecole Polytechnique and the Conservatoire des Arts et Métiers were founded in 1794 and the Ecole Supérieure des Arts et Métiers in 1819.

⁵² See, *Projet de l'Etablissement d'une Ecole Gratuite de Commerce à Dijon . . . (Dijon, 1780), passim.*

dustrie. The founders were two Paris silk merchants, by the names of Brodard and Legret, who, however, were not the first ones independently to conceive the idea of an academic education for business.

We can disregard here the abortive Dijon plan, but as early as 1800 a similar idea had been broached by the Lyon merchant Vital-Roux in a pamphlet *De l'influence du gouvernement sur la prospérité du commerce*. In this tract he had suggested the establishment all over France of special schools of commerce, i.e., schools devoted to the teaching of the commercial sciences, and this proposal was known to Brodard and Legret. But they gave it a specific twist. They decided to educate young men for the requirements of the industrial age that was in the offing. Applicants to the school were expected to possess enough scientific knowledge to become, if not engineers, then at least commercial agents of industry, able to direct the business end of industrial operations. For the first half of the nineteenth century this was a far-seeing program indeed. Although at first hardly successful, the school was very fortunate in the selection of its leaders and backers. In 1825 its staff was joined by no less a person than the economist, Jérôme Adolphe Blanqui (1798-1854). On the consultative committee were Ternaux, Davillier, Casimir Périer, and Jacques Laffitte, some of the big French business leaders of the time, in addition to Jean Baptiste Say, the great economist, Chaptal, the chemist, and a few other businessmen and scholars.

Nevertheless, during the July Revolution of 1830 the school broke down and was taken over by Blanqui. A former student of Say, but then under the influence of Saint Simon, he had an unusual understanding of the educational needs of the new era. Like Büsch at an earlier and Mevissen at a later date, Blanqui recognized the existence of an educational gap.⁶³ On the other hand, in his aims he was more modest than the founders of the school. Changing its name to *Ecole Spéciale de Commerce* implied a more restrictive program and the recognition of the existence of the *Ecole Centrale des Arts et Manufactures*, the Paris institute of technology, founded in 1829.

The *Ecole Supérieure de Commerce*, as it is now called, had originally been conceived and was actually built up by Blanqui as an academic institution paralleling those in the technical field, founded

⁶³ See his *Cours d'Economie Industrielle 1836-1837* (Paris, 1837), chapter 8, especially pp. 182, 183.

in the same period. It taught business subjects such as bookkeeping, exchange and arbitrage operations, business correspondence, commodities of commerce, commercial geography, commercial law, foreign languages, and handwriting. There were also industrial subjects: geometry, mechanics, chemistry, applied physics, technology, and design. Blanqui himself undertook the instruction in political economy and history of commerce. A comparison with Büsch's curriculum will show close similarity, except for such courses as were meant to be an introduction to technology of future business leaders in the field of industry.

What has been said earlier with regard to the eighteenth century holds true also for the first three quarters of the nineteenth. That is to say, a clear distinction between academic and secondary education for business had not as yet been made. This statement pertains especially to the *Ecole Supérieure de Commerce* in its later years and for the similar institutions which under the same name were founded in the French provinces from the 1880's on. According to the material available, the Paris *Ecole Supérieure* and her sisters were then secondary schools rather than academic institutions. The *Ecole* certainly had lost a good deal of the academic character that distinguished it in the Blanqui era,⁵⁴ when not only Blanqui but also a second outstanding economist, Joseph Garnier, was connected with the school.

In 1868 the Paris *Ecole Supérieure de Commerce* was purchased by the Paris Chamber of Commerce from a corporation which had owned it since 1852, a logical step, since the Chamber already had its hand in primary commercial education. It may have meant to tie the school to the secondary level, for it founded in 1881 the *Ecole des Hautes Etudes Commerciales* which, as the name indicates, was to be an academic institution for well-educated high school graduates. More probably, however, we meet here again a lack of clear distinction between secondary and genuinely academic education of future businessmen which is typical of the period. When Ehrenberg studied the Paris setup in the 1890's he could not discover any deep-reaching difference between the two schools, except that the quality of teaching was higher in the last-named institution.⁵⁵ It

⁵⁴ I use as criteria: the age of the students at their admission, the curricula, and to a less extent the teaching method.

⁵⁵ Ehrenberg-Memorandum, 38 ff. I have checked several contemporary French publications which do not bring out any fundamental difference either, nor does [Jacob Schoenberg] *Technical Education in Europe, Part I: Industrial Education in France* (State Dept., Washington, 1888), 76 ff. The stand-

was, at the same time, something of a preserve for the upper layers of the bourgeoisie. The Paris setup seems to have had some influence on the Berlin *Handelshochschule*, as is indicated by the fact that a professor of the *Ecole des Hautes Etudes Commerciales* attended the opening of the Berlin school.

It is not known to me if Blanqui's school was studied by the men who, in 1847, promoted academic training of businessmen in Belgium. In that year one F. J. Matthysens, a physician with a special interest in statistics, published in Brussels a pamphlet entitled *Enseignement Universitaire.-Projet d'organisation d'une université belge de commerce et d'industrie*. As the title indicates, the author pointed to the necessity of instruction of future businessmen on an academic level; he sketched the spirit which should permeate the proposed institution, and at the same time he submitted a detailed curriculum and the plan for an internal organization. Independently and somewhat earlier in the same year the then minister of foreign affairs, Adolphe Dechamps (1807-1875) had made a similar suggestion to the councils of the city and province of Antwerp. Dechamps' goal was to educate through scholarly instruction an elite of businessmen for Belgian commerce and industry. Under these circumstances it is not surprising that Matthysens' project was quickly taken up by the state and city officialdom, landing finally on the desk of the minister of the interior, Charles Rogier (1800-1885). In charge also of public instruction, he issued favorable instructions to a commission established to prepare what became the *Institut Supérieur de Commerce d'Anvers* (now styled *l'Institut Supérieure de Commerce de l'Etat à Anvers*), which after some delays was brought into being under a suitable convention between state and city.⁵⁶ Classes started in December, 1853.

Again the question must be posed: did the Antwerp school really provide instruction on an academic level? By 1870 the Belgian government considered the school as the equivalent of a genuine university. By 1900, however, Ehrenberg was not impressed. He found the teaching to be even less satisfactory than at the Paris *Ecole des Hautes Etudes Commerciales*. Nevertheless, it exerted some in-

ard work is Eugène Léautey, *L'Enseignement Commercial et les Ecoles de Commerce en France et dans le Monde Entier*, 4th ed. (Paris, 1895), 3-60, 182 ff.

⁵⁶ Institut Supérieur de Commerce de l'Etat à Anvers, *Annuaire 1952 avec une Notice Historique de 1852 à 1952* (Anvers, 1952), 6-24; Ehrenberg-Memorandum, 47 ff.; Hooper and Graham, *op. cit.*, 111 ff.; L. Simonin, "Ecole de Commerce en France et à l'Etranger" in *Revue des Deux-Mondes*, XCIVIII (1872), 712 ff.

fluence on the Cologne institution, and strangely enough, the above-mentioned French provincial business schools are said to have been modeled after that in Antwerp rather than after the one then existing in Paris.

Still a second institution of interest to us was founded in the 1850's. It was the *Wiener Handelsakademie*, suggested by the Vienna manufacturer, Bernhard Wilhelm Ohligs, whose original plan was published in a pamphlet entitled *Die Gründung einer kaufmännischen Lehranstalt in Wien, ein Antrag an die Niederösterreichische Handels- und Gewerbeakademie* (Wien, 1856). The institution was brought into existence by an association established for this purpose, and opened its doors in January, 1858. It was in the beginning not academic in character, but after various reorganizations the last grade was taught more or less on an academic level and ultimately only graduates of high schools were admitted thereto.⁵⁷ Genuinely academic from the outset was a second Vienna school founded in 1898, i.e., at the time when the *Handelshochschule* was getting under way in Germany. This was the *Exportakademie*, today *Hochschule für Welthandel*. As early as 1896 the Austrian legislature was becoming alarmed about the country's passive balance of trade, and an appropriate academic education of businessmen was among the suggested remedies. Private contributions and a state subsidy made the school possible. It goes without saying that for lack of textbooks and teachable material it faced initially the same difficulties which were encountered by the pioneering German schools, all the more so since it aimed at training specialists for the export business. In contrast to the early German ventures, general education was not attempted at the *Exportakademie*.⁵⁸

During the period under investigation England remained in the rear: for about a hundred years after Postlethwayt's proposal the idea of scholarly training for business seems to have lain dormant in that country. It was taken up again in 1853, the driving force being Leone Levi (1821-1888). Born as an Italian Jew, Levi migrated to England at an early age and was later naturalized, becom-

⁵⁷ Anton Kleibel, *Fünfzig Jahre Wiener Handels-Akademie* (Wien, 1908), *passim*, especially 3, 4, 89; Goldschmidt, *op. cit.*, 29-30.

⁵⁸ *Die K. K. Exportakademie in Wien, zur Erinnerung . . .* (Wien, 1916), 11 ff.; Karl Oberparleiter, "Geschichte der Exportakademie und der Hochschule für Welthandel" in *50 Jahre Hochschule für Welthandel in Wien* (Wien, 1948), 5 ff.; "Programm für die Export Akademie des K. K. Österreichischen Handelsmuseums in Wien, Studienjahr 1899/1900" in the appendix of *Apt. Handelshochschule in Berlin*, 33-48. I have been unable to locate material on the business school in Budapest, which was founded in 1900.

ing also a convert to Protestantism. After several vicissitudes in business, he made a name for himself by promoting the establishment of chambers of commerce all over Britain and by working for the modernization of commercial law. Thus it is not surprising that in 1852 he was called to the newly established chair of commerce at King's College, London. Soon thereafter we find him supporting the establishment of a Mercantile and Maritime College in the City of London. This institution was to serve for the education and improvement of gentlemen engaged in those pursuits. A trade museum was to be attached thereto; and instruction was to be distinctly on the college level. Like Pombal, Büsch, and Mevissen, Levi and his friends were discovering a gap in the educational system of their country. Although it was leading in commerce and navigation, English clerks and sailors were so far not professionally trained. They learned the practice of their trades on the job, but they remained all their lives ignorant of the background of their calling. The proposed college was to remedy this situation. In establishing it the promoters also meant to revive "Gresham College," an educational foundation set up by the will of Sir Thomas Gresham. This institution had flourished in the eighteenth century and was supposed to provide lectures on divinity, law, physics, astronomy, geometry, rhetoric, and music; it had decayed in the early nineteenth century. Nothing came of the plan.⁵⁹

In order to understand the next step in the English development we have to look once more to France. Since the middle of the nineteenth century Paris possessed, besides the schools treated above, the *Ecole Libre des Sciences Politiques*. This school had been established for the purpose of educating men for the diplomatic service, as well as for public and colonial administration. On top of that, business administrators were to be trained for monopolistic enterprises and those working on the basis of special privilege or concession, such as railroad companies, commercial and mortgage banks, and other large financial institutions. The curriculum pivoted around political science and economics. Today we would certainly not consider it an academic business school. Nevertheless, by the end of the nineteenth century it actually became the model after

⁵⁹ *Mercantile and Maritime College in the City of London. Report of the Public Meeting for the Formation of the above Institution . . . May 17, 1853. The Right Honorable the Earl of Harrowby in the Chair* (London, 1853), *passim*, and especially 4, 30-35. For Leone Levi, see the article in *Dictionary of National Biography* and for King's College, London, the 1953 edition of the *Encyclopaedia Britannica*, XXII, 873.

which such schools were patterned.⁶⁰ The Paris attempt at educating administrators for big business together with public administrators is noteworthy; one of the early pertinent Harvard plans aimed in the same direction.

As a matter of fact, the *Ecole Libre des Sciences Politiques* was before Sidney Webb's mind when in 1895 he established the *London School of Economics and Political Science*. A great fortune, left by a public benefactor to him as a trustee and to be used at his discretion, enabled him to take action. Sidney Webb (1859-1947) has himself left a clear presentation of his program and intentions. He meant to establish an educational institution of university rank, at which "the business or official administrator" could get such training as he needed. As expressed in the first prospectus of the school, it was to provide higher commercial education, which was defined as a system "which stands in the same relation to the life and calling of the manufacturer, the merchant, and other men of business as the medical schools of the universities stand to that of the doctor." The curriculum actually consisted of courses in economics, statistics, history and geography of world trade, international trade, economic and industrial history, transportation, railroad administration, accountancy, insurance, banking and currency, commercial and common law, finance, and taxation.⁶¹

Webb was determined to create what he called a "commercial university," a term which can be found every so often in the contemporary literature. Translated into our language, he considered himself the founder of an academic business school. Yet courses on business were all but absent from the catalogue. Webb himself was convinced that business "despised" courses such as "methods of commerce," i.e., courses on business technique and business administration. That is to say, far-seeing as he was, he fell prey to typical contemporary businessmen's opposition to a theoretical education of the young generation. We have described it before. He lagged behind other proponents of academic business schools in that he did not see the possibility of a science of business. But it is also possible that he considered economics as the "theory of affairs," as was brought out very clearly by a French author of the 1870's.⁶² I

⁶⁰ I am not aware of the existence of a history of the *Ecole Libre*. I have used its annual publication: *Organisation & Programme des Cours*.

⁶¹ Sidney Webb, *London Education* (London, 1904), 97 ff., 123 ff.; Beatrice Webb, *Our Partnership* (New York, 1948), 86 ff.; Albert Abbott, *Education for Industry and Commerce in England* (London, 1933), Chapter XI.

⁶² Simonin, *op. cit.*, 712.

cannot say to what extent this idea was held around 1900 by businessmen and social scientists, but probably it haunted many of them, as can be seen from the overemphasis on teaching the background of business rather than its technique and organization — a typical peculiarity of late nineteenth-century academic business schools.

Of course, Webb did not stand alone in England in his endeavors, although he went furthest. Whereas Webb relied on a Paris model, the newly founded Faculty of Commerce of the University of Birmingham is supposed to have been influenced by the Cologne example. Moreover, in Manchester, Liverpool, and Leeds there were stirrings at that time, but nothing had been accomplished as yet.⁶³ Manchester was soon to have a two-year business course at Owens College.

One more question must be posed and answered at this point: did the American academic business schools, existing by 1900, exert any influence on the European development and especially on the organization of the Berlin *Handelshochschule*. As to the three older German institutions (Leipzig, Aachen, and Cologne) and those described in this section, that possibility can be discounted from the outset. Not so with regard to the Berlin school. It will be remembered that, prior to the establishment of the latter, the American academic business schools had been studied by Jastrow himself, sent to the United States by the Berlin merchants, and by Carl Dunker, to become Jastrow's successor as the *Rector* of the Berlin *Handelshochschule*.⁶⁴

⁶³ Ehrenberg-Memorandum, 50; *Die Städtische Handels-Hochschule in Köln*, xi, xii; Apt, *Handelshochschulbewegung*, 35.

The Swiss development was in the first decade of the twentieth century still in its earliest stages so that a footnote must suffice. Conditions in Zürich, Bern, and Basel are touched upon (see pages 44, 53, and 79). Saint Gall possessed a *Handelshochschule* since 1899, but it had no full-time professors before 1904. See the Prussian government document cited in footnote 17; Ernst Gagliardi, Hans Nabholz, and Jean Strohle, *Die Universität Zürich 1833-1933 und ihre Vorläufer, Festschrift . . .* (Zürich, 1938), 835; and as to Saint Gall, "Fünfzig, Jahre Handels-Hochschule St. Gallen 13./14. Mai 1949" in *St. Gallen Hochschul-Nachrichten*, Nr. 28, Festnummer [1949], 4-6.

The first Scandinavian academic school of business, that at Stockholm, began later than that at Berlin and to a certain extent under Berlin's influence.

⁶⁴ For the following, see Ignaz Jastrow, "Bericht über eine volkswirtschaftliche Studienreise durch Nordamerika" in *Berliner Jahrbuch für Handel und Industrie*, I (1904), Vol. I, 419 ff. (the pertinent passages of the report were translated into English, see U. S. Bureau of Education, *Report of the Commissioner of Education for the Year ending June 30, 1905* (Washington, 1907), I, 97 ff., also the highly complimentary remark in the introduction, xxiii, xxiv); Carl Dunker, "Die Mittelschulen in ihren Beziehungen zu Handel und Gewerbe" in "Reiseberichte über Nordamerika erstattet von der Kommission des Königlich Preussischen Ministeriums für Handel und Gewerbe" in Prussia,

The learned travelers were quick to discover the few pertinent American institutions of higher learning. There was the Wharton School of Finance and Commerce, attached to the University of Pennsylvania and founded in 1881 to provide an academic education adapted to the special needs of future businessmen, a great educational achievement of its time. There was the Amos Tuck School of Administration and Finance (founded in 1900 in connection with Dartmouth College), which was planned as a graduate school. Jastrow and Dunker also took note of the College of Commerce and Administration at the University of Chicago, which, according to its plan, meant to introduce future businessmen to the understanding of and dealing with the problems with which they would be faced in that capacity. Finally, they were aware of the existence of similar schools at Madison, Wisconsin; Ann Arbor, Michigan; Berkeley, California; and Urbana, Illinois. They stressed the fact that the last four schools were attached to some of the largest state universities. It rightly appeared to Dunker that the School of Commerce, Accounts and Finance of New York University was something different, concentrating on the training of accountants. (In fact, it was originally rather a vocational evening school attended by high school graduates.)

Jastrow's report indicates that he was not overly impressed by the American academic business schools as potential models for their Berlin counterpart then in the planning stage. But the American achievements and much more so the attitude of American businessmen toward an academic education of their presumed successors seemed very encouraging to him. He stressed that the German way to a better general education of businessmen had to be very different from the American one, since the latter country could rely on the liberal arts colleges, for which there was nothing analogous in Germany. Dunker, on the other hand, stated outright that Germany had nothing to learn from the American institutions, since the educational systems of the two countries were entirely too different. Both men liked the Chicago practice, promoted by Lyman J. Gage, the former Secretary of the Treasury and then an outstanding Chicago bank president, of inviting active businessmen to teach the young generation on the basis of their experience in their lines of

Haus der Abgeordneten, Sammlung der Drucksachen, Anlagen zu den Stenographischen Berichten, 20. Legislaturperiode, II. Session 1905/06, VI (Berlin, 1906), No. 257, pp. 3098, 3099.

business.⁶⁵ Actually the Berlin *Handelshochschule*, once brought into existence, took over that policy. On its staff for many years was a leading Berlin exporter. In addition, Berlin businessmen were asked to speak on the managerial and technical aspects of their lines of business. This was a necessity, since the scientific treatment of business had not yet gone beyond the fundamentals, and publications dealing with special lines or aspects of business were still entirely lacking. In that respect one can actually see American influence bearing fruit in Berlin about 1907.⁶⁶

RECAPITULATION

Before proceeding to examine further the roots and development of American education for business, it is desirable to pause and to present in general terms what can be learned from the study of the material surveyed so far. Prior to about 1880 there was in the minds of the European promoters of commercial education no clear distinction between the education of businessmen and that of business leaders. This confusion is reflected in the previously mentioned lack of a dividing line between secondary and academic education for business. Only after about 1890 do we find a clear bifurcation.

This situation and the existence of two alternative goals — general education versus vocational training — were mirrored in the method and the subject of teaching. As to the former, even where a truly academic level was the goal, traditional academic lecture methods were usually rejected. We have seen, for example, that Büsch did not consider his pupils sufficiently advanced to listen to lectures, so that his most important courses used the seminar and a rudimentary case method. As a matter of fact, Büsch does not seem to have devised the latter; it can be traced back to a proposal of the 1710's by one Thomas Watts, presumably a teacher of mathematics and accounting. He suggested combining the teaching of accounting with that of business methods, acquainting the "learners" at the same time also with the use of business documents. Says Watts:

I know not anything [which] will more promote my design for the advance-

⁶⁵ Jastrow, "Bericht," 438, 439.

⁶⁶ Jastrow, *Bericht über die 1. Rektoratsperiode*, 82. Those businessmen's papers were published under the title *Gewerbliche Einzelvorträge*, ed. Älteste der Kaufmannschaft von Berlin, three series, Berlin (Reimer). The volumes are not accessible to me. The publication may well have been inspired by the corresponding American book: Henry Rand Hatfield, ed., *Lectures on Commerce*, delivered before the College of Business and Administration at the University of Chicago (Chicago, 1904).

ment of this Art [accounting based on the understanding of business methods and business documents]; and therefore have made some Progress in digesting a proper Waste Book of Cases for the Uses above, . . . I shall continually add such Cases to them as may be drawn from any new Manner or Place of Trading I shall be inform'd of, or can possibly get light into. And I am persuaded if this method was follow'd . . . we should not find so many Youths on their Entrance on Business so much Strangers to it"

Wurmb, the founder of Büsch's school, in his later Swedish venture improved on the seminar-case method of teaching, so that it came to approach what was subsequently known in France as *Bureau Commercial*, in Germany as *Musterkontor*.⁶⁷ A fictitious business enterprise was established and the students, instead of receiving theoretical instruction, were running it, alternating in the various jobs involved. The procedure was developed in various directions and taken over by the American so-called business colleges (actually secondary schools) of the late nineteenth century. It was undoubtedly a kind of case method geared to objectives different from ours, and a popular one for many decades, especially on the secondary level. It was dropped by academic business schools when instruction reached the highest level. (In Antwerp the plan was used as late as 1900.) The real educational difficulty was seen by Mevissen, who insisted that future businessmen should be trained in the *use*, i.e., the application, of knowledge. This was a clear adumbration of the goals of the Harvard Business School case method, discussed in the next section of this article. In Cologne and Berlin we find emphasis put on seminars rather than on case studies, and Jastrow's own special seminar method has been mentioned and described. No doubt these developments of teaching methods were interlinked.

This is also true in respect to the development of the subject matter. In the eighteenth century it presented no problem, since the commercial sciences, as conceived by Savary and his followers, stood in the center of instruction. The situation was very different when by 1890 the movement toward academic education of future businessmen got under way. As a matter of fact, the early founders of independent academic business schools were on the horns of a dilemma. They had to reckon with the lack of scientific research on

⁶⁷ Watts, *op. cit.*, 27, 28. Wurmb's method is described in some detail in Büsch and Ebeling, *op. cit.*, II, 320. For the later development of the method, see Ehrenberg, *op. cit.*, 48; Simonin, *op. cit.*, 713/14; G. H. Gautier, "Les Ecoles de Commerce aux Etats-Unis" in *Revue des Deux-Mondes*, CIV (1872), 248 ff.

business matters and therefore with the lack of teachable material. Consequently, if they stressed business, they were in danger of remaining below a genuinely academic level, as in Paris, Antwerp, and the older Vienna school. Conversely, if they stressed the academic level of teaching, they simultaneously overstressed the instruction in economics, as was done, for example, in London and Cologne, and thus missed the target. It is here that Jastrow's greatest achievement ties in. He seems to have built the first school which was a real business school and at the same time a genuinely academic one. As time progressed and conditions changed, people switched their stand. As a typical example Max Apt may be mentioned. In 1900 he identified academic education of businessmen with general education, while in 1907 he was emphatic that professional training should stand in the focus, as in institutions of technology and the agricultural colleges.⁶⁸

As indicated above, the decades between 1890 and 1920 witnessed an international trend toward the establishment of academic education for business, but the movement did not have grass roots origins, since academic education for business meant the formation of an elite. By 1900, for example, the voters of the Swiss canton of Basel refused permission to set up a *Handelshochschule* at public expense. Thus, when academic business schools were to be established, or business courses to be introduced at older schools, a few persons had to take the lead as the carriers of the trend. In the eighteenth century promoters were often statesmen, such as the Portuguese Pombal, the Austrian founders of the short-lived Vienna school, or Duke Karl Eugen of Württemberg. Yet in the nineteenth century the Belgian ministers Dechamps and Rogier were exceptional. That is to say, in the Mercantilist eighteenth century there was a better chance for statesmen to play a role in the area than in the liberal nineteenth century. Usually nineteenth-century leaders came from the ranks of businessmen or educators. As to businessmen, we remember (besides the eighteenth-century merchant, Wurmb, founder of commercial schools in Hamburg and Sweden) the nineteenth-century Frenchmen Vital-Roux, Brodard, and Legret; the Viennese manufacturer Ohligs; and the Cologne merchant Mevissen. We will soon meet Joseph Wharton (1826-1909), the Philadelphia Quaker and metal industrialist who founded the Wharton School of Finance and Commerce, and the banker Edward Tuck (1857-1942), founder of the Amos Tuck School of Administration and Finance at Dart-

⁶⁸ For Apt's two pamphlets see footnote 41; pages 7, and 5, 13, respectively.

mouth College. In passing I may mention the Baron Revoltella and Ferdinando Bocconi who in 1877 and 1902, respectively, with their own funds established the business schools of Trieste and Milan.⁶⁹ Finally, educators leading in the field were (besides the eighteenth-century J. G. Büsch, C. D. Ebeling, and Johann M. F. Schulz) Professor Richard Ehrenberg, who by his memorandum sparked the German *Handelshochschul*-movement, and Hermann Raydt, the director of a secondary commercial school in Leipzig, who started the ball rolling in that city. In the nineteenth century there also appeared among the promoters a few chamber-of-commerce officials, such as Max Apt in Berlin and Johann Zapf, secretary of the Vienna chamber of commerce, who carried the initial fight for the *Exportakademie*. Moreover, Ehrenberg was, in the early stages of his pertinent activities, an official of the Altona chamber. Such men can be considered as standing between businessmen and statesmen. All of them saw gaps, but the gaps might have appeared to be of a somewhat different character in the light of the positions which they held.

It was the logical consequence of divergent viewpoints that the pioneers had to be articulate about what to them appeared necessary. They had to convince others, to gain followers among influential people, and to arouse potential students. Thus we often find as the first step toward the establishment of a new school a pamphlet or printed memorandum or published address.

THE AMERICAN ACHIEVEMENT

Although at least two earlier suggestions in this direction are on record,⁷⁰ the American movement toward academic instruction of future businessmen started in earnest only in 1881, when the Whar-

⁶⁹ Goldschmidt, *op. cit.*, 32; Ciro Poggiali, *Ferdinando Bocconi. Mercurio in Finanziera* (Milan, 1945), 273, 274. Tuck, Revoltella, and Bocconi may have been donors only, the business counselor Leopoldo Sabattini was the driving force in Milan. His original plan is reprinted in the book by Bagiotti mentioned below, pp. 283 ff.

The name of the Trieste school, a rather small one, was *Scuola Superiore di Commercio, Fondazione Revoltella*. The history of the Milan *Università Bocconi*, Tullio Bagiotti, *Storia della Università Bocconi, 1902-1952* (Milano [1952]), has not been obtainable prior to the completion of this paper.

⁷⁰ C. S. Marsh, "General Lee and a School of Commerce" in *Journal of Political Economy*, XXXIV (1926), 657 ff. A few years before General Lee made his proposal in the academic year of 1868/69, one Robert C. Spencer of Milwaukee had in 1866 suggested that a College of Commerce be attached to the University of Wisconsin; see Cheesman A. Herrick, *Meaning and Practice of Commercial Education* (New York, 1904), 257 ff.

ton School of Finance and Commerce was founded at the University of Pennsylvania. For about a decade thereafter there seems to have been no contact between the American and European exponents of the trend, but in the 1890's leaders of the movement in the several great nations began to investigate and report upon the existing institutions and the plans of the others. From then on influence lines can be traced in both directions, but, as will be recalled, the degree of cultural borrowing remained slight in view of the fundamental difference of the educational systems in the United States and Europe.

First of all, the American college is a unique type of educational institution which is not duplicated in Europe. By contemporary American standards it provided a maximum of general education, and the discussion boiled down to examining the question of whether or not future businessmen should go to college.⁷¹ Those answering this question in the affirmative, however, were usually not satisfied with the traditional college curriculum. More often than not they demanded a complete change so as to make that curriculum more useful for future businessmen. While they aimed only at broadening the new generation which they wished to draw into the colleges, they actually made the borderline between general education and professional training a fluid one. This situation had no counterpart in Europe. Moreover, we will remember that on the Continent an academic education of businessmen was widely desired, because it was hoped that they would thus attain a better standing in the community. In the United States the businessman ranked high in public esteem, and that incentive was therefore lacking. Yet educational gaps seem to have resulted in cases of inferiority complex.

On the other hand, there were also similarities. In the United States as in many European instances (Paris, Vienna, Antwerp) the distinction between secondary and academic education of future businessmen was not clear-cut. In the United States this was due to the fact that there was then in general no manifest delimitation of secondary from higher education.⁷² (This situation also explains

⁷¹ Representative is Joseph Wharton, *Is a College Education Advantageous to a Business Man?* Address . . . (p.p. [Philadelphia], 1890), *passim*, and Thwing, *op. cit.*, *passim*. See also, Edward Chase Kirkland, *Dream and Thought in the Business Community, 1860-1900* (Ithaca, New York, 1956), 83 ff.

⁷² For this point, see Andrew Fleming West, *The American College* in Nicholas Murray Butler, ed., *Monographs on Education in the United States*, No. 5 (New York [1900]), 4, 5.

why schools of business administration were founded both on the undergraduate and the graduate levels and why there was a blurring of the distinction between the two, as, for example, at Dartmouth.) Under these circumstances the result was a lack of clarity as to the possible goals: training businessmen versus training business leaders,⁷³ a lack of clarity which troubled the European movement also. Such resemblances, and others which we will find, were due to the identity of problems and the limited number of solutions possible in the same stage of high-capitalistic development that was being reached by the countries concerned. The identity of problems made up for the institutional and cultural differences and kept these differences from becoming as influential as they otherwise would have been.

As already mentioned, the founding in 1881 of the Wharton School of Commerce and Finance represents the start of the American movement toward academic instruction of future businessmen. Joseph Wharton, the industrialist, was not only the financier of this new type of school, but also the driving force. Very soon Professor Edmund Janes James (1855-1925), a German-trained economist, came to play a decisive role both in the school and in public as an exponent of the American movement.⁷⁴ To him was due the development and articulation of the Wharton program. Yet Wharton's own ideas are of great interest, especially when compared with Mevissen's. Both Wharton and Mevissen described in almost the same words the unsatisfactory contemporary education of the coming generation of businessmen. It was the recognition of this inadequacy which impelled both of them to act. Yet the aristocratic German thought in terms of a business elite, the democratic American in terms of the business class; and the former's plan was much better thought through and worked out than that of the latter's.

Wharton established professorships in accounting; money and currency; taxation; industry, commerce and transportation; and elementary and business law. At the same time, he stressed the spirit in which the teaching was to take place, a matter which was not considered by Mevissen at all. Students at the Wharton School were to be persuaded that it was immoral and practically inexpedient to make money in any way except by giving service; that

⁷³ A subcommittee report of 1915 regarding the Harvard Business School is typical for its lack of understanding of the correct goal. See Herbert Heaton, *A Scholar in Action: Edwin F. Gay* (Cambridge, Mass., 1952), 83.

⁷⁴ See the article on James in *Dictionary of American Biography*.

accuracy of accounts and fidelity in trusts were good business policies; that it was wise to be cautious in contracting debts; that it was comfortable and healthy to possess pecuniary independence; that the fraudulent businessman was not only to be prosecuted by law, but also ostracized by social sanctions; and that trying to get through the meshes of the law was objectionable. If one keeps in mind that the two plans were written at exactly the same time (in America the heyday of the Robber Barons) the different climate of enterprise comes out very strikingly. And equally telling are the national differences: the successful German thought strictly in terms of a scholarly education, the successful American was moralizing.⁷⁵ Moreover, the American to a certain extent even tried to prescribe what was to be taught in the various courses; the German would not have dared do so. It would have been unthinkable.

Professor James's interpretation of Wharton's plan represented an improvement. Since the existing colleges did not answer the need of future businessmen, Wharton, according to James, had created a model of education for successful business management and efficient public service by businessmen. Their education at the school would be liberal and practical. It should broaden and liberalize the young generation (whatever this may have meant). It should enlarge their views, widen their outlook, inculcate public spirit — today one would speak of giving them a sense of responsibility — so that the interests of our society and civilization drifting into the hands of the rising business class would be in good hands. Therefore, instruction was to pivot around the principles underlying successful civil government and the management of property. The curriculum of the Wharton School actually offered courses on American history (offered by McMaster), government, political science, economics, finance, money and banking, and certain business subjects, namely, accounting, business law, and business practice (technique and organization).⁷⁶

⁷⁵ As to Wharton, see the article in the *Dictionary of American Biography*. The plan is in Wharton's pamphlet (see footnote 71), 28 ff. Most important is [E. R. Johnson], *The Wharton School: Its First Fifty Years 1881-1931* (Philadelphia, 1931).

⁷⁶ Edmund Janes James, "Schools of Finance and Economy" and "Education of Businessmen," in American Bankers Association, *Proceedings* (1890), 20 ff.; (1892), 18 ff. (see also *ibid.* [1891], 19 ff.). These two items were also published independently under the titles *Education of Business Men* (New York, 1891) and *Education of Business Men I and II* (New York, 1892). See also *idem*, *Education of Business Men in Europe, A Report to the American Bankers Association* (New York, 1893); *idem*, *Commercial Education* in Nicholas Mur-

To the scholar investigating the execution of the programs in Philadelphia and Cologne, the differences appear significant. In Cologne a complete professional university was created along the lines of institutes of technology, schools of mining, or agricultural colleges, for, in contrast to America, German highest education was professional education — broad, rounded out, and scientifically well-grounded. It was this kind of education which Cologne had to adapt to the specific task at hand. In contrast, the Wharton School course was at the beginning a two-year course taking the place of the junior and senior college years. Only in 1894 had the school "blossomed out with a four-year undergraduate course . . . , and [it] added facilities for graduate study soon thereafter."⁷⁷ Different educational systems were in this case reflected in different organizational solutions of the identical problems, but — as I suspect — also in different levels of instruction.

Yet similarities probably outweighed dissimilarities. In Philadelphia as in Cologne, economists were in the key positions and non-business courses ranked high. Both schools independently developed something which one may best characterize by the paradoxical phrase "specialized general education for businessmen." The men concerned may have felt intuitively, without ever becoming articulate on this point, that general education, as it was still possible in the middle of the nineteenth century, had become obsolete at its end through the disintegration and fragmentization of our knowledge. Forcing a future lawyer to sleep through a class in chemistry or a future chemist to doze off in one on psychology is not general education. As things stand today and stood already by 1880, "general" education must be conceived to vary according to the future profession of the student. It can now only mean starting from the nucleus of professional knowledge to be acquired and thence going as far back and around as possible for the purpose of providing a broad background of knowledge and insight to serve in the students' future professional activities. Both Wharton and Mevissen, and the men who put their plans into effect, went far along the correct road, although not yet stressing sufficiently the professional nucleus of the educational programs. Nevertheless, these two schools were far better than certain of those in Paris, London, and Chicago, which

ray Butler, ed., *Monographs on Education in the United States*, No. 13 (New York [1900]). Of James's "Education of Business Men" there exists still another edition with a slightly different title page (Chicago, 1898).

⁷⁷ Heaton, *op. cit.*, 70, footnote.

wanted to educate businessmen by merely broadening them and without touching on the subject of business as such.

Only slowly did Wharton become a full-fledged professional school. It is significant that up to about 1896 mercantile law was taught by a professor of statistics. Of the two courses in accounting, one was in charge of a professor of journalism, who also taught business practice and banking; the other was given by an assistant professor of political science. But in the end, while emphasis on the essentials of a general education and acquaintance with the social sciences did not lessen, education at Wharton had by 1906 become "professional in purpose dealing with business not only in general but also in reference to the kind of business the students expected to enter upon graduation."⁷⁸

We have spent a good deal of time on the comparison of the Philadelphia and Cologne achievements because they were in America and Europe, respectively, representative of the earlier stage of matured academic education of businessmen. The later stage is represented by Berlin and by Harvard. In both these schools, in contrast to the earlier ones, professional education was from the outset put into the center of the curriculum, and one may speculate if this similarity was due to the exchange of opinions between Jastrow and Taussig, whom we can characterize as among the intellectual fathers of their schools.

It has been mentioned before that in the early years of the twentieth century the Wharton School had introduced graduate courses. We must add that the Amos Tuck School of Dartmouth College founded in 1900 straddled the borderline too. It was meant to be a graduate school of business, but the seniors of the college could attend its first-year course and get credit therefor. The curriculum emphasized general education along the Philadelphia-Cologne lines; it was much under the control of the economics department and in the beginning not overly successful.⁷⁹ The Harvard Graduate School of Business Administration of 1908 (originally established as a graduate department under the Faculty of Arts and Sciences) went far beyond these beginnings by being from the first a truly professional school on the graduate level with an indubitable academic character in the European sense.

⁷⁸ Johnson, *op. cit.*, 17, 18.

⁷⁹ John King Lord, *A History of Dartmouth College 1815-1909* (Concord, N. H., 1913), 497, 498; Leon Burr Richardson, *History of Dartmouth College* (Hanover, N. H., 1932), 736, 737; Herrick, *op. cit.*, 272-74, 319-23.

But its real importance lies in the creative solution of old problems, creative even when one takes a critical view. By focusing attention on professional education, Harvard went further than any contemporary business school in this country and further than almost all its truly academic European counterparts. But the founders did not disapprove of the idea of a high level of general education for future businessmen. To the contrary, since the A. B. degree was required for admission, what was by contemporary standards a maximum of general education was a prerequisite for entering students. Moreover, as we will see, one of the original departments provided background information for the professional courses. Yet it can be doubted that that maximum was an optimum for the purpose at hand; and one may ask if more specific entrance requirements would not have helped in attaining the educational goal.

At Harvard professional education for business was made to pivot around three fields: Principles of Accounting, Commercial Contracts, and Economic Resources. One can compare this with the traditional triad: accounting, correspondence, and mercantile arithmetic, and one will see the step forward. Yet at the same time one finds lack of clarity and wavering. The first area is, of course, entirely technical. The teaching of the second originally overstressed the legal aspect of business administration, and the third is of a background character. On the whole, and rightly so, the school emphasized business administration, but not the elements common to all lines of business. Stress was laid on the teaching of transportation, banking, accounting, auditing, and insurance. When one knows the program of the *Ecole Libre des Sciences Politiques* at Paris, of its great influence at the time, and of the fact that its duplication in the United States had been suggested and tried, one cannot help surmising that it was taken as a model by at least some of the founders of the Harvard School.⁸⁰ Just as in Paris, there was a preference at Harvard for teaching those lines of business that could easily be professionalized (or bureaucratized, we might say — probably to the horror of the Harvard Business School founding fathers, now in

⁸⁰ As to the Ecole Libre see above page 73. Recommendations of its adaptation to the American scene can be found in Edmund Janes James, *Outline of a Proposed School of Political and Social Science* in Philadelphia Social Science Association, *Papers read before the . . .* (Philadelphia, 1885); see page 14, according to which students were expected to come from the ranks of businessmen; *idem*, "A School of Political and Social Science" in *Ethical Record*, III (1890); Samuel Eliot Morison, ed., *The Development of Harvard University since the Inauguration of President Eliot, 1869-1929* (Cambridge, 1930), 533 ff.

their graves). These were the lines stressed among the elective courses. Also emphasized, albeit unsuccessfully, was language training in line with the activities of the school's European counterparts.

Harvard's most remarkable contribution, however, was in the field of teaching methods. We have discussed earlier that this was an age-old problem. Many proponents and exponents of an academic teaching of businessmen since the eighteenth century wanted instruction on an academic level, but with the exclusion of academic teaching methods. Mevissen was most advanced and hit the nail on the head: *transmittal of knowledge was less important than training in the application of knowledge*. At this point Harvard found what was for its time the creative solution, called then the "laboratory method." It was an adaptation of the Harvard Law School case method, first to be used in the course on contracts only, as was most natural, but *mutatis mutandis* later to be applied in all the other courses as well. (The reader will understand that this presentation deals only with conditions prior to 1910.)⁸¹ In the matter of method, this was a radical departure from the teaching procedures established in the field elsewhere, a statement which holds true even in view of the *Musterkontor* method, described previously, and of Jastrow's advanced seminar teaching.

It was equally creative and an innovation in the United States that the Harvard Business School, very soon after its start, began to combine the teaching of with research on business subjects. It is not known to me whether the German examples (Leipzig, Cologne, Berlin) were before the eyes of Dean Gay and those who led the school into that combination, typical of the German university system, but not of the American college. The necessity of research in the new field, if one really wanted to teach it on a high level, would have *forced* that step on the administration. But cultural borrowing is possible, all the more since the Harvard school began its career with an obligation, very similar to the one which stimulated the Berlin *Handelshochschule*, to make an all-out effort. The Berlin school was approved by the Prussian authorities under the condition that it should be conducted on the same level as were the other Berlin academic institutions, a level which was famous. Similarly, it was demanded of the Harvard Business School that it should live up to the level of the other Harvard "schools," a level which was also recognized as remarkably high. Jastrow, on the one

⁸¹ See "Preliminary Announcement: the Graduate School of Business Administration," four-page flyleaf, and the first catalogue of the School (1908).

hand, and Dean Edwin F. Gay, on the other, were the men to make good those obligations.

But there was a telling difference in the approach. In Berlin, business subjects were taught as technical matters, this phrase being used here in the wider sense of "applying means to a purpose on hand," i.e., they were taught in the same spirit in which one teaches at an institute of technology. The Harvard teaching, in contrast, had under Gay's influence a moralizing aspect. Emphasis was being placed on educating students to conduct business "decently."⁸² That is to say, the same national difference which we could notice when studying the Cologne and Philadelphia plans is evident here once again. It is easily explained by the different environments.

CONCLUSION

The purpose of this article has been threefold. (1) As is indicated in the title, it is meant to present Ignaz Jastrow's contribution to the development of academic education for business. We have found him connected with one of the outstanding institutions devoted to that purpose, which he helped to establish after having studied the then existing American business schools and after having devised an appropriate, advanced curriculum which led academic education for business on a new road. He was its first *Rector* for three years but carried the administrative load for about five, and whoever has experienced the difficulty of operating a new organization knows how heavy that load must have been at times. Last but not least Jastrow very successfully taught economics to a crop of young businessmen. No mean contribution indeed!

But (2) the article goes beyond paying tribute to Ignaz Jastrow. It presents a short history of academic education of businessmen from the first inception of the idea to the founding of the Berlin *Handelshochschule* and the Graduate School of Business Administration at Harvard University. Such a history seems timely and appropriate. The coming fiftieth anniversary of the Harvard Business School is, quite naturally, leading to a good deal of reminiscing and recalling of its history. Thus, a description of the background of the School's beginnings may prove useful.

Yet (3) the purpose of the article is far from presenting a mere narrative. We are interested in the evolution of the basic *problems* of an academic education of future businessmen. In pursuing this

⁸² Heaton, *op. cit.*, 76.

interest we have identified and described the unfolding of the following:

(a) *Provided that an academic education of businessmen is desired at all (which was by itself a problem for many decades), where should it take place?* Four answers were possible and each one had its proponents. Such education could and can be attached to universities, as Marperger first suggested and as was achieved, for example, in Leipzig and generally in the United States. Or one could and can educate businessmen in close proximity to engineers, i.e., at institutes of technology, as was attempted in Aachen and in the United States, first at the Worcester County Free Institute of Industrial Science and as is now being done at the Massachusetts Institute of Technology. As may be mentioned in passing, what has remained of Jastrow's Berlin *Handelshochschule* is now attached to the Charlottenburg Institute of Technology. Moreover, it was and is possible to organize independent academic business schools, as suggested by Mevissen and achieved in Paris, Antwerp, Vienna, Cologne, and Berlin. Finally, education of businessmen on an academic level can go hand in hand with social studies in the widest sense, and on this basis schools were actually established in Paris, London, and Frankfurt.

(b) *We have observed the great difficulty of cutting loose from the secondary and of reaching a truly academic level of teaching.* The problem was not solved before about 1900, unless (as in Paris and London) one neglected business subjects altogether and fed future businessmen a fare of economics and political science instead.

(c) *Problematic since the beginning of the nineteenth century was the educational goal.* Was an academic education of businessmen to be exclusively or mainly general education, was it to be professional education pure and simple, or should these two goals be combined? Again we have seen that each possibility had its proponents. The American solution of graduate professional training engrafted on "specialized general education" on the undergraduate level is certainly a good one, but not transferable to the European Continent with its different educational systems.

(d) *Closely tied to the educational goal is the question of what kind of students should be subjected to the educational process and to what end.* In the eighteenth and early nineteenth century one aimed at the education of good business technicians, and the degree of general education which they should receive was a moot one. When the possibility of an academic education of businessmen came

to the fore again at the end of the nineteenth century, it was seen with increasing clarity that such an education was adapted to turning out business leaders or a business elite, and the end to be attained by the educational process shifted.

Thereby (e) *the subject and method of teaching became problematic*. Only toward the end of the period under investigation was research on business topics advancing. Only then was a meaningful subject evolving that could properly be taught on a truly academic level to achieve professional education and not merely to broaden the future business leaders' background. As to method, we have pointed to the development which led from the transmittal of knowledge and experiments in teaching its application to systems which emphasized the latter.

In the course of the development three types of "academic" business schools were founded in three successive periods after the Napoleonic Wars. The earliest type, represented by schools in Paris, Antwerp, Vienna, and Trieste, *tried* to provide the highest type of commercial education but remained stuck somewhere between the secondary and the university level. Business had not advanced sufficiently to be the object of scientific inquiry and the status of businessmen was not high enough to warrant and make possible a truly academic education for business. The second type consisted of the schools founded between about 1880 and 1900. The teaching became now genuinely academic; yet the emphasis was not on business method and business administration but on the economic and legal background of business. To be sure, future business *leaders* were now to be educated; not, however, by making them efficient operators but by broadening them. This type comprises all the contemporary American schools of commerce (except the one at New York University) from the Wharton school on, the *Ecole Libre* in Paris, the London School of Economics, the *Exportakademie* in Vienna, the early German *Handelshochschulen* in Leipzig and Cologne, and the *Università Bocconi* in Milan. It was only the third type, brought into existence first in Berlin and slightly later at Harvard, which by putting the teaching of business subjects into the center developed the modern type of academic training for business, although the Wharton school and the Cologne institution were already independently moving in the same direction.

Finally, our story of emerging problems and evolving answers must be seen against the background of technological and of eco-

nomic development from early to high capitalism and from a mercantile to an industrial society, a fascinating story indeed.⁸³

"For example, the gradual disappearance of the course on *Warenkunde* is significant. The knowledge of commodities gained by long mercantile experience became obsolete through scientific analysis or test of the chemist or physicist. The pertinent teaching became superfluous.

The present status of many of the problems here treated historically has been brought out recently by Thomas H. Carroll, *Business Education for Competence and Responsibility* (The American Association of Collegiate Schools of Business, 1956); Heinz Hartmann, *Education for Business Leadership, A Study* prepared for the Industrial Relations Center, University of Chicago (Paris, 1955).

By Charles J. Kennedy

ASSOCIATE PROFESSOR OF ECONOMICS
AT UNIVERSITY OF NEBRASKA

The Eastern Rail-road Company to 1855 *

Compared with the great inter-regional networks, the Eastern Rail-road did not loom large. Its creation, however, is an integral part of New England history and well worthy of inclusion in any first chapter of American railroading history. The development pattern is one of piecemeal extension from several population centers, the linking of the segments, and the proliferation of branch lines. External difficulties took the shape of competition from stage and boat lines, and the rivalry of the fledgling Boston & Maine. Internally, the chief problems revolved around establishment of an effective management organization and the maintenance of adequate financial controls. Threading a populous route from Boston to Portland, Eastern's future seemed bright. Yet, in a faint foreshadowing of events of a far later day, main-line profits were swallowed up by operation of branch connections built or acquired with more enthusiasm than foresight and, once acquired, not easily disowned.

The business history of the Eastern Rail-road Company differs considerably from the histories of the other 14 major roads¹ which, together with the Eastern, comprise the modern Boston & Maine Railroad. Until 1855, the Eastern appeared to its contemporaries to be one of the best railroads in New England, an example of sound, aggressive management. George Peabody, David Neal, and the superintendents developed a good business with a promising future, even though they faced competition from the Boston

* This article is based upon material used in a forthcoming volume on the history of the Boston and Maine Railroad.

¹ The 15 major roads that became a part of the Boston & Maine system by 1900 were the Boston & Lowell, the Boston & Maine, the Boston, Concord & Montreal, the Cheshire, the Concord, the Connecticut River, the Connecticut & Passumpsic Rivers, the Eastern, the Fitchburg, the Nashua & Lowell, the Northern, the Portland, Saco & Portsmouth, the Troy & Boston, the Vermont & Massachusetts, and the Worcester & Nashua. In addition, there were 33 other railroads that were separately operated before becoming a part of one of the 15 major roads.

Although none of these roads used an ampersand in its corporate title, we have substituted the sign in this article to improve readability.

& Maine, the small, crossline steam-railroads, the interurban horse railroads, and boats.

In a following article, an account will be given of how the generally excellent management of the forties deteriorated until an accumulation of mistakes and circumstances brought insolvency and a spectacular public investigation in the seventies. No one of the other 14 major roads experienced such "looseness of management and extravagance of expenditure."²

Why was it that although the Eastern developed into a large system it did not become the nucleus of the modern Boston & Maine? Did the early Boston & Maine and the Eastern wage a continuing struggle or effect co-operation? Who were the men that controlled and managed the Eastern? Could they have acted otherwise? These and other questions appear as one analyzes the history. The development of this road is significant not only for its role in the history of Essex County and the area from Boston to Maine but also as a case history in an industry that profoundly influenced the organization, methods, and policies of big business.

The Eastern and the other railroads launched in the Boston area in the early 1830's were possible because of the enthusiasm aroused by nine promoters during the decade of the twenties. Led by Nathan Hale, editor of the *Boston Daily Advertiser*, they turned the public's attention from turnpikes and canals to steam railroads as the only practical mode of transportation that could rapidly develop Boston and central New England. The Boston & Lowell was chartered on June 5, 1830, followed by charters for the Boston & Worcester and the Boston & Providence a year later. The Boston & Lowell, likewise, was the first to elect its directors and begin grading for the roadbed. Each of these three roads was opened for service between Boston and its respective terminal in June or July, 1835.³

THE BUSINESS SIDE OF CONSTRUCTION

It was in the spring of 1833, while the three original Boston railroads were still in the construction stage and not yet opened even for partial service, that two rival railroads were projected to go

² *Report of the Committee on Railroads on the Matters Relating to the Eastern Railroad*, Massachusetts Senate Document 169 (Boston: Wright & Potter, 1876), p. 4.

³ C. J. Kennedy, "The Early Business History of Four Massachusetts Railroads," originally published serially in the *Bulletin of the Business Historical Society*, March-December, 1951. See the issue of March, 1951, XXV, 56-58.

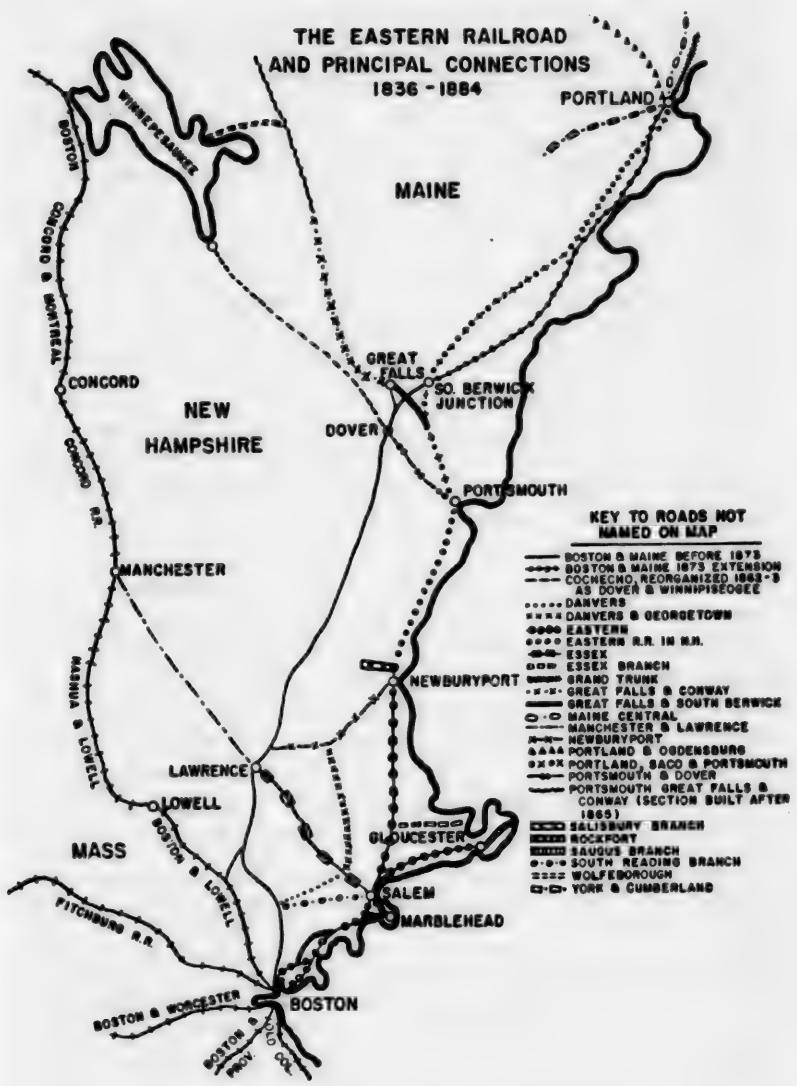
north of Boston. One was the Eastern and the other was the Andover & Wilmington, to be renamed and expanded until it became the "Boston and Maine Railroad." Neither project in 1833 was proposed as an all-rail route to Portland, Maine, but once construction was under way, the ambitions of each group grew until the two roads became engaged in a race and struggle to monopolize the Boston-Portland and intermediate traffic.

The first effort to obtain a franchise for the Eastern Rail-road Company was a failure. It was promoted by two rival groups of real estate promoters, one, headed by General William H. Sumner, who was transforming Noddle's Island into East Boston, and a second group interested in Chelsea. Each group emphasized to the Massachusetts legislature the importance of its own locality to the projected road to Salem, which would be the northern terminus. The petitioners included Thomas H. Perkins, a prominent Boston merchant and chief stockholder of the Granite Railroad Company of Quincy,⁴ David Henshaw, a Boston druggist and a director of the Boston & Worcester Railroad, Philip Chase, George Blake, and W. H. Sumner. The opposition included stage lines, a turnpike company, and shipping interests who were afraid of interference to harbor facilities from a railroad bridge. Thirty stages and a number of wagons were providing overland transportation between Boston and Salem. The legislative committee denied the petition with the ironic comment that "the enterprise of the gentlemen . . . enlarging the bounds of the city . . . ought not to be confused with the necessity of a rail road to Salem."⁵

The same legislature, however, on March 15, 1833, chartered the Andover & Wilmington, a branch railroad only 7½ miles in length, connecting with the Boston & Lowell. On April 7, 1835, the Andover & Wilmington obtained a franchise to extend its line to Haverhill. The following June, the New Hampshire legislature chartered the "Boston and Maine (N. H.)" as the obvious link to join with the Andover & Wilmington to provide an inland rail route between Boston and Portland.

⁴ The Quincy road was constructed to haul granite a few miles to the shore where it went by water to be used in the Bunker Hill Monument. Gridley Bryant, quarryman and engineer, built the road in 1827, using gravity and horses to furnish the motive power. Perkins was influential in overcoming opposition in the Massachusetts legislature to obtain a franchise. He served as president of the company and during the 1820's was the only big capitalist in Boston who was a strong advocate of the new iron railroad.

⁵ Francis B. C. Bradlee, *The Eastern Railroad* (Salem: Essex Institute, 1917), 3-4; Massachusetts Senate Documents, 1833, No. 52, p. 13.



By early summer of the same year, the three original Boston roads opened for business to their termini, and railroad enthusiasm ran high. With new courage and under the leadership of George Peabody, a group of businessmen in Salem made preparations to try once again for permission to build a railroad between Boston and Salem. On July 7 a group of subscribers elected a committee with Peabody as chairman, and several meetings were held during the summer. The committee found that prospects of the legislature's approval were dim unless the proposed road was extended to the state line near Newburyport, where it could connect with proposed roads in New Hampshire and Maine to provide all rail service to Portland. Since another group had been soliciting stock subscriptions for a railroad between Newburyport and Salem but as yet had no franchise, the two groups united and finally obtained a charter on April 14, 1836. Peabody's committee had employed good legal counsel and was greatly assisted by a preliminary survey and the testimony of their civil engineer, James M. Fessenden. The Eastern Rail-road Company was thus finally chartered, although during the legislative committee hearing it had faced considerable hostility from ten or twelve men who represented the Andover & Haverhill Railroad.⁶

Also, in the summer of 1835, some citizens of Portsmouth, New Hampshire, held their first meeting to obtain sufficient support to construct the "Eastern Railroad in New Hampshire." A preliminary survey was made the same season and a charter obtained from the New Hampshire legislature in June of the following year.⁷

By that time, however, the "Maine, New Hampshire & Massachusetts Rail Road" had been chartered by the Maine legislature to serve as the final segment of the inland route between Boston and Portland, and the promoters attempted to maintain a monopoly

⁶ *Report of the Proceedings of the General Committee of the Subscribers to the Stock of the Eastern Rail-Road, Presented at a Meeting of the Subscribers, April, 1836.* (Salem [Mass.] Gazette Press, n.d.), pp. 6 and 7; Minutes of Subscribers to Eastern R.R., Aug. 4, 1835 (in Vol. I of Stockholders' Minutes book).

Directors' and stockholders' minutes of all railroads cited in this article are located in the contract bureau of the Boston & Maine Railroad at Boston, except the Boston & Worcester minutes deposited in Baker Library of Harvard University.

⁷ Act of N. H., June 18, 1836, c. 66. (Copy in *Boston & Maine Railroad System, Volume II, Statutes of Maine, New Hampshire and Vermont Relating to Boston & Maine Railroad and Leased Lines* (Boston, 1902), p. 279. Hereafter this volume will be cited as *B&M . . . [Statutes]*. Volume III includes legislation in Mass., except for the Boston & Lowell system which appears in Volume I.

so that the Eastern would remain a stub-end road ending at Portsmouth.⁸ However, a rival group on March 14, 1837, obtained a charter for the Portland, Saco & Portsmouth Railroad, to serve as the third segment of the shore route. Although chartered, both of the corporations in the State of Maine slumbered while the Andover & Wilmington and the Eastern managements concentrated on the construction of their routes in Massachusetts and New Hampshire.

Four officials played an important role in the construction of the two Easterns. President George Peabody was the leader and definitely earned the title of president of the Massachusetts corporation, a nonsalaried position, which he held until 1842. An able speaker and a leading merchant of Salem in a day when Salem was still a great seaport, he gave considerable prestige, enthusiasm, and advice to the large board of 11 members selected to represent the towns along the route. Benjamin T. Reed of Boston was treasurer of the two Easterns and the Portland, Saco & Portsmouth as well as chairman or agent of the executive committee of the latter railroad. Furthermore, he assumed the added duty of contracting for their iron in England.⁹

The minutes, especially of the PS&P, show that Reed was very capable and furnished the directors with a complete picture of their financial condition each quarter. Colonel James M. Fessenden, the chief engineer of both Easterns, was quite influential. The directors relied extensively on his judgment in such major decisions as terminating the railroad in East Boston with the use of a ferry to reach the city of Boston, adopting a modified design of the rail devised by Fessenden, himself, and the selection of locomotives. He was one of the best paid engineers of the day, receiving \$5,000 to \$6,000 annually. A West Point graduate, he was previously the chief engineer on the Boston & Worcester Railroad. The fourth official who played a major role in the construction and first operation

⁸ Act of Me., Mar. 30, 1836, c. 179 (copy in *B&M . . . [Statutes]*, II, 3). Directors' Minutes of the Maine, New Hampshire & Massachusetts Railroad, June 5, 1838.

⁹ *Report of the Committee Appointed at a Meeting of the Stockholders of the Eastern Rail-road Company, to Examine into the Past Doings and Present Condition of Said Company, and to Report at an Adjourned Meeting, to be Held at Boston, May 21, 1840* (Boston: Dutton & Wentworth's Print, 1840), p. 10; Directors' Minutes of Eastern R. R., Sept. 25, 1837, Dec. 22, 1840; Directors' Minutes of Eastern R. R. in N. H., Aug. 16, 1839, Jan. 21, 1840; Directors' Minutes of Portland, Saco & Portsmouth R. R., Dec. 28, 1840, Feb. 16, Apr. 21, Dec. 30, 1841.

of the Eastern was Stephen A. Chase, a director who was elected chairman of the executive committee that supervised the construction of the road. He received a salary of only \$1,500, indicating he may have been a part-time official. These men formed an excellent team who worked with the directors.¹⁰

Locating the Eastern Rail-road involved numerous problems. The original entry into Boston by means of a ferryboat from East Boston was later generally considered to have been a mistake. At the time, however, it reduced construction costs and provided an "air line" service into Boston. Furthermore, the Andover & Haverhill continued to enter Boston via the Boston & Lowell tracks, a circuitous routing that did not rival Eastern's use of the ferry. The location of the road between East Boston and the coastal towns raised other questions. It had been the general impression of the original subscribers that a considerable portion of the turnpike between Boston and Salem could be used for the roadbed of the railroad. Colonel Fessenden's preliminary survey, however, showed that only a very small part, if any, would be of use to the railroad.¹¹ There was considerable pressure from various towns along the coast for their ideas of the precise location of the railroad. Generally, the directors empowered the executive committee, and sometimes the president, to make minor decisions on the location, usually conferring with the citizens of the respective towns.

In the construction of the road, masonry was necessary at times to provide retaining walls for cuts. Since the removal of soil and rock was expensive, stone masonry was used in lieu of the modern practice of making wide cuts. The largest job was the Salem tunnel, which was constructed by digging a ditch through the sandy soil of downtown Salem, building a stone arch the full length of 718 feet, and finally covering the arch with dirt upon which a pavement was laid. The Salem tunnel was one of the largest pieces of granite work undertaken in New England up to that time and was built under contract by E. Gilmore & Company.¹² Smaller pieces of

¹⁰ Directors' Minutes of Eastern R. R. in N. H., July 10 and Aug. 18, 1839, Jan. 21, 1840; Stockholders' Minutes of Eastern R. R., Aug. 4, 1835; *Report of . . . Committee of . . . Eastern Rail-Road, April, 1836*, p. 2; Directors' Minutes of Eastern R. R., Apr. 24, June 1, 1836, Sept. 18, 1837, May 14, Sept. 28, Oct. 8, 1838, Apr. 12, 1839, Mar. 8, 1841; Kennedy, "Early Business History of Four Mass. Railroads," *loc. cit.*, XXV, 87-88. When the first portion of the road was opened and Chase became superintendent, his pay remained at \$1,500 for 2 years at which time it was increased to \$2,500.

¹¹ Stockholders' Minutes of Eastern R. R., Aug. 4, 1835.

¹² Engineer J. M. Fessenden's report in Directors' Minutes of Eastern R. R., May 11, 1840.

masonry sometimes were constructed by railroad employees working on a daily wage under the supervision of the engineer.

The two Eastern railroads were economically constructed, but the project was a slow process because of the difficulty in obtaining capital. The 602 stockholders of the Massachusetts corporation were generous in their enthusiasm but too short on cash during the business depression of the late thirties to complete the payments on the stock for which they had subscribed. The Massachusetts legislature, however, in 1837 voted to loan \$500,000 in stipulated installments for construction between Boston and Newburyport. The loan was in the form of state scrip which was purchased by Baring Brothers and Company of England. Because the serious business depression of the late thirties made it practically impossible to collect assessments, the legislature released the loan on more generous conditions than originally intended. Without the state aid, which was about one-fourth of the net capital used to construct the Eastern, the Massachusetts corporation would have required several more years to complete its line. Other methods also were used to meet the financial problems. The contractors at one stage accepted twelve-month notes. On another occasion the directors personally purchased a large number of delinquent shares and later resold them at no profit in order to promote the interests of the company. A small amount of capital expenditure was saved when the East Boston Company donated 15 acres for terminal facilities to connect with a ferry to Boston.¹³

Once the ground was broken on July 22, 1836, construction proceeded rapidly until November, 1836, when it became necessary to cancel two contracts for lack of capital. The first installment from the state loan in the spring of 1837 was sufficient to encourage most shareholders to pay their assessments; in fact, many anticipated that the road could be completed to the state line with only a total of \$66 assessments on each \$100 share. This view proved to be too optimistic. Expenses for the 13 miles between Boston and Salem were larger than originally estimated. All but 2½ miles required

¹³ Directors' Minutes of Eastern R. R., Aug. 27, Sept. 23, Nov. 29, 1836, Apr. 24, 1837, Mar. 26, Apr. 14, 1838; Act of Mass., Apr. 18, 1837, c. 190 (copy in *B&M . . . [Statutes]* III, 184), Apr. 25, 1838, c. 93 (copy in *B&M . . . [Statutes]* III, 187), Apr. 1, 1839, c. 74 (copy in *B&M . . . [Statutes]* III, 190), May 20, 1852, c. 82 (copy in *B&M . . . [Statutes]* III, 210); Ralph W. Hidy, *The House of Baring in American Trade and Finance* (Cambridge, 1949), p. 261; *Report of the Committee . . . of the Stockholders of the Eastern Railroad . . .* May 21, 1840, p. 5. The Railroad purchased land in Boston from the Lewis Wharf Co. for a depot.

either excavations, embankments on the marshes, or truss or pile bridges across water. Engineer Fessenden defended this type of construction and the route selected as being quite economical to operate and maintain. The road was opened as far as Salem on August 27, 1838, and celebrated with an elaborate excursion from Boston to Salem, a "handsome collation," and many speeches, including a stirring address by President Peabody forecasting a new economic era.¹⁴

Stockbrokers, led by P. P. F. De Grand were anxious for the Eastern to push forward with its remaining construction. When the road was opened to Salem, the stock was selling between 80 and 88. With the advance of construction and with good patronage on the Boston-Salem portion, new stock was sold and almost reached par in 1839, when the first dividend was paid. With the construction of the tunnel through the Salem business district and the uneventful completion of the track on the two Easterns, the Boston trains reached Newburyport in June, 1840, and Portsmouth on November 9, 1840.¹⁵

The construction of the Portland, Saco & Portsmouth Railroad was financed almost entirely by stockholders residing in Boston, and the managers of the Eastern (Massachusetts Corporation) were largely responsible for its early development. When the Eastern trains reached Portsmouth, the promoters of the PS&P hesitated no longer. Preliminary meetings were held and the company organized on December 25, 1840, with three of the seven directors coming from the Eastern — Stephen A. Chase, Benjamin T. Reed, and David A. Neal. Reed was elected treasurer and Neal named president of the PS&P. Reed also was made "agent of the executive committee" and not only performed the usual agency duties but supervised the three "divisionary engineers." For his work, Reed received \$2,500 and 0.5 per cent commission on the purchase of rails and chairs and 1 per cent commission for insurance adjustment on the iron.¹⁶

¹⁴ Directors' Minutes of Eastern R. R., July 22, Nov. 29, 1836, May 14, 1838; Stockholders' Minutes of Eastern R. R., Aug. 4, 1835, May 8, 1837; *Address at the Opening of the Eastern Rail Road, between Boston and Salem, August 27, 1838. By George Peabody, President of the Corporation.* (Salem: Printed at the Gazette Office, 1838.)

¹⁵ Directors' Minutes of Eastern R. R., Sept. 5, 1838, Apr. 5, Oct. 9, 1839; Directors' Minutes of Eastern R. R. in N. H., June 5, 1851.

¹⁶ E. C. Kirkland, *Men, Cities and Transportation: A Study in New England History, 1820-1900* (Cambridge, 1948), I, 205, fn. 47, citing abstract of the *Returns of the Corporations, 1843, Maine Legislative Documents, 1844*, pp. 17-

S. F. Belknap & Co. obtained the contract for the grading, masonry, and laying of the superstructure¹⁷ after a very spirited competition arising from the "extreme dullness" in business conditions.¹⁸ To cross the Piscataqua River at Portsmouth, the Eastern and the PS&P railroads purchased a majority of the stock in a corporation already maintaining a bridge, the Proprietors of the Portsmouth Bridge Company. Reed and his associates were able to hold down the construction cost to \$23,150 for the average mile, which was less than most New England railroads spent for through traffic lines. The PS&P was opened for business in 1842 as a close affiliate of the Eastern Rail-road Company.¹⁹

THE FORTIES

In the first decade of its operation, the Eastern management worked out the everyday techniques of providing a new form of transportation, faced with competition and cost problems. There was little experience of earlier roads that could be used; much remained for the Eastern and other contemporary companies to develop in the efficient operation of railroads. In this process the directors, as well as the chief officials, were important. The large board of 11, later 12 directors, was reduced to 7 in July, 1841, a few months after most of the initial construction had been completed.²⁰ The men elected at that time constituted the board until 1848, except for the replacement of William Sturgis by his business partner, John Bryant. When the construction was completed, George Peabody retired as president. He had been in reality a

23; *Boston Daily Advertiser*, Feb. 18, 1839, quoting the *Portsmouth Journal*; *Boston Advertiser and Patriot*, Dec. 8, 9, 1840; Stockholders' Minutes of Portland, Saco & Portsmouth R. R., Dec. 25, 1840. Directors' Minutes of Portland, Saco & Portsmouth R. R., Dec. 28, 1840, Jan. 8, Dec. 30, 1841.

¹⁷ Directors' Minutes of Portland, Saco & Portsmouth R. R., Apr. 22, 1841.

¹⁸ Annual Report of Portland, Saco & Portsmouth R. R., 1841. The titles of the published annual reports of the directors to the stockholders of the several railroads vary. For convenience all references to these reports will be cited as Annual Reports.

¹⁹ Directors' Minutes of Portland, Saco & Portsmouth R. R., Dec. 24, 1841, Feb. 3, Mar. 29, June 6, 1842, Jan. 18, Dec. 13, 1844, Feb. 10, 1847. The 1847 directors' report to stockholders compares the PS&P to 11 other roads. The statistics used by them included the total cost of original construction and betterments for all roads as of Dec. 31, 1845. Cf., Directors' Minutes of Eastern R. R., Feb. 5 and 18, 1841, Dec. 30, 1841.

²⁰ Amos Binney, Boston, 1837-1847; Isaiah Breed, Lynn, 1836-1855; Daniel Adams, Newburyport, 1837-1849; John Hooper, Marblehead, 1839-1849; John E. Thayer, Boston, 1840-1849; David A. Neal, Salem, 1840-1855; John Bryant, Boston, 1842-1848.

chairman of the board and was not interested in operating a railroad. Peabody's successor, David A. Neal, assumed a number of executive duties for the initial salary of \$2,000, which, together with the \$2,000 he received from the PS&P,²¹ represented a reasonable salary for a full-time chief executive. Benjamin Reed continued as treasurer of both Easterns and the PS&P. The Eastern and the PS&P, however, had different men as superintendents.

The informal and indefinite manner of delegating authority on the Eastern during its period of construction was replaced in 1841 with precise assignments as the result of the directors' studies of neighboring railroads. The new business organization worked very efficiently under President David Neal, who displayed "great frugality, sagacity, and energy." One of Neal's first actions, together with Director John Hooper, was to investigate the payroll, especially the practice of extra pay for overtime.²²

The volume of traffic on the early Eastern varied with the general conditions of business. When the road was opened to Portsmouth by the end of 1841 (including the leased track of the Eastern Railroad in New Hampshire), the directors were very optimistic. But, by mid-1842, they lamented that they had operated under disadvantages of slack business such as they hoped never would occur again. The situation became worse during the next twelve months, however, before there was an improvement in the passenger business, Eastern's chief source of revenue. Meanwhile, the management reduced expenses by holding the maintenance of the way to a minimum, practically closing the machine shop, and reducing salaries and miscellaneous expenses. Such economies helped to offset the expense of replacing the new depot and wharf at East Boston when it was destroyed by fire on January 25, 1842, the same day it was opened to the public.²³

Even before the main line began to lose business in 1842, Eastern's Marblehead branch suffered from stagecoach competition. Eastern had constructed the 3½ mile branch with inexpensive strap-iron rail in 1839, financed by stock subscribed by local residents. During the first two years the branch was profitable, carrying an

²¹ Directors' Minutes of Eastern R. R., Sept. 18, 1841; Directors' Minutes of Portland, Saco & Portsmouth R. R., Dec. 30, 1841.

²² *Report of the Committee . . . of the Eastern Rail-road . . .*, May 21, 1840, p. 10; Directors' Minutes of Eastern R. R., Dec. 22, 1840, Feb. 5, 18, Mar. 8, 27, Sept. 16, Dec. 18, 1841, Apr. 4, June 4, 1842; "Railways in Massachusetts," No. 10, by "Mass.," *Boston Transcript*, May 7, 1855.

²³ Annual Report of Eastern R. R., 1842, pp. 3, 9, and *passim*, 1843, 1848.

average of 120 passengers daily as well as freight for the Forest River Mills.²⁴ Stage lines fought the branch and accounted for a slump in its passenger traffic that lasted to 1847. The Eastern would not engage in a price war; instead it replaced the strap iron with a chair rail in December, 1843, and improved the service.

The Eastern was unique in its original attitude toward freight traffic. Rather than handle its own freight business, the railroad let contracts to individuals furnishing them the buildings, the train, a train crew, and the ferriage at East Boston. David Merritt and other contractors paid the railroad by the ton each week at rates that were comparable with the "general merchandise" rates on other roads, even though the Eastern did not incur all the expenses of freight service borne by the other roads.²⁵ Nevertheless, the Eastern directors felt that the freight business was unsatisfactory; it paid for itself but did not contribute to the profits. Water competition was severe and left the railroad largely with shipments of less-than-carload-lot freight. Of course, the general depression in business added to the difficulties.²⁶

In common with other railroads the Eastern contracted the express of small packages. A Mr. Hale of Newburyport had been an unsuccessful bidder for the freight service when David Merritt was granted a contract. Hale then offered to run an express business, and his contract with the Eastern in early 1841 predates the contract held by Harnden on the Boston & Worcester and Western railroads, heretofore attributed to be the first express company. In order to prevent passengers from carrying express and small freight as personal baggage, the Eastern limited free baggage to 40 pounds per person, of which 14 pounds could be "parcels or small bundles."²⁷

Over 80 per cent of Eastern's total railway revenue came from

²⁴ Directors' Minutes of Eastern R. R., May 11, 1840. Besides enjoying a thriving maritime business the Marblehead community began to attract manufacturers of cordage, boots and shoes and other items. By 1855, there were 2,500 persons employed at Marblehead in making boots and shoes, alone. See *The Travelers' Railroad Guide from Boston to Portland* (1857). (Copy in Baker Library, Harvard University.) The freight rate was made by a special committee and probably should be classed as a special contract (Directors' Minutes of Eastern R. R., Nov. 18, 1839).

²⁵ Kennedy, "Early Business History of Four Mass. Railroads," *loc. cit.*, XXV, 219-20.

²⁶ Directors' Minutes of Eastern R. R., Jan. 18, Mar. 5, May 13, July 1, Sept. 28, Oct. 9, 1839, Jan. 22, Mar. 27, July 12, Dec. 9, 1841, Jan. 16, 1843.

²⁷ *Ibid.*, July 28, 1840, Feb. 5, Aug. 5, Dec. 18, 1841; Aug. 9, 1842. The Minutes of the Boston & Worcester Railroad, July 20, 1840, refer to a contract

passenger traffic during the forties, decreasing to about 70 per cent in the fifties as freight became more important. Compared to the Boston & Maine Railroad, Eastern's dependence upon passenger traffic was about 10 per cent greater. Although the average revenue per passenger-mile was higher on the Eastern than on the Boston & Maine, being more than 3 cents in the early forties and about 2.7 cents the next few years, this did not mean the Eastern was more profitable than its neighbor. After paying operating expenses, fixed charges, and miscellaneous items, such as taxes (which were very light before the Civil War), the Eastern had about 40 cents from the average revenue dollar (approximately the same as the Boston & Maine), with which to pay dividends.²⁸ Spending nearly every cent for dividends, the Eastern increased its payments to 8 per cent by 1845 and attempted to maintain that level, only slightly outperforming the Boston & Maine. To the public the Eastern appeared a well-operated, good-paying road. The density of passenger traffic, expressed as passenger-miles per mile of road, increased steadily and reached 200,000 by the mid-forties.

Meanwhile, although separately operated, the Eastern and the Portland, Saco & Portsmouth co-operated very closely under the management of the same chief officials. Opened in 1842, the PS&P did very well from the beginning. Depending upon the through travel between Boston and Portland for approximately five-sixths of its business,²⁹ the single road performed efficiently without incurring any appreciable debt, and began paying dividends in 1843. The next year the payments rose to 6 per cent and prospects were excellent for at least that amount every year. Each road hauled the cars of the other road without charge. Joint management of the two railroads was definitely anticipated.³⁰

This arrangement was changed on January 28, 1843, by a contract between the Boston & Maine and the Eastern designed to avoid "dangerous competition." Accordingly, Boston & Maine agreed not to construct the Maine, New Hampshire & Massachusetts Railroad

with a Mr. Leonard. If Leonard had an express business in July, 1840, he would predate all other contenders.

²⁸ Eastern's capital stock totaled only a little less than that of the Boston & Maine. By 1843, Eastern's paid-in capital stock was \$1,800,000. It was increased in 1847 and by 1849 was \$2,850,000.

²⁹ Computed from President's report in Directors' Minutes of Portland, Saco & Portsmouth R.R., Nov. 30, 1846.

³⁰ Directors' Minutes of Eastern R.R., Jan. 2, Apr. 4, 1842, including contract between Eastern and PS&P, dated Apr. 5, 1842; Directors' Minutes of Portland, Saco & Portsmouth R.R., Jan. 18, 1842.

to parallel the PS&P in return for the same advantages as the Eastern in relation to the PS&P. Furthermore, the Boston & Maine and the Eastern agreed to establish equal rates over the two routes with a provision allowing either road to use competing rates with water transport.³¹ Such was the first of a series of agreements between the two roads to restrict excessive competition.

It was the water competition that soon led to a substitute for this contract. The Eastern and the PS&P attacked the problem with two weapons. Unable to get the boat lines to agree to a new schedule of fares, the two railroads proposed the purchase of a boat to run from Portland to the eastern ports to feed traffic to the railroad.³² Although the Boston & Maine would not participate, the other two roads purchased a majority interest in the *Huntress*³³ and with its use forced a compromise from competing boats east of Portland. It was agreed that the *Huntress* would withdraw from the Penobscot district and that one of the rival boats would touch at Portland and divide the receipts.³⁴ Meanwhile, the Eastern and the PS&P established an express train as a second method of winning business from the boats. The express fare between Boston and Portland was only \$1.00 instead of the regular rate of \$4.00.³⁵ The Boston & Maine chose not to establish an express train on its route, and consequently received only approximately one-fourth of the Boston to Portland passenger traffic. On the Eastern route, express trains soon became the most popular trains.³⁶ The Boston & Maine did not complain seriously about the express train, since the contract of January 28, 1843, provided for rates to meet boat competition.³⁷

The Boston & Maine directors did protest, however, about Eastern's fares on the regular trains. When the two roads signed the

³¹ Contract dated Jan. 28, 1843, and signed by (1) B&M, (2) Me., NH&Mass., (3) Eastern, and (4) PS&P railroads. Copy in *Senate Document No. 19, Annual Reports of the Rail-Road Corporations in the State of Massachusetts, for 1843* (Boston: Dutton & Wentworth, 1844), p. 51. Hereafter these reports will be cited as Mass. R.R. Returns.

³² Directors' Minutes of Eastern R.R., Jan. 27, Mar. 3, 1843.

³³ Annual Report of Eastern R.R., 1848, p. 35; Directors' Minutes of Portland, Saco & Portsmouth R.R., Dec. 13, 1844, Dec. 10, 1845.

³⁴ *Ibid.*, Dec. 10, 1845.

³⁵ The through rate was \$3.75 until Sept. 30, 1843, when it was raised to \$4.00 on the Eastern route to equal the rate on the Boston & Maine route.

³⁶ The number of passengers by each route and type of train are given for each year in the president's report to the stockholders, November 30, 1846, in the Portland, Saco & Portsmouth directors' minutes. Also see Directors' Minutes of Eastern R.R., Sept. 30, 1843; Annual Report of Eastern R.R., 1848, p. 68.

³⁷ Cf. Directors' Minutes of Eastern R.R., May 24, June 10, 1843.

agreement of January, 1843, the regular through rate between Boston and Portland was \$3.75 via the Eastern and \$4.00 via the Boston & Maine. On September 30, 1843, the Eastern raised its fare to \$4.00. In the spring of 1845, the Eastern wanted to lower the rate. The problem was submitted to commissioners, as provided in the 1843 contract, but they were too slow in their decision to satisfy the Eastern directors.

Faced with new competition from the "propellers," more serious than the rivalry of the side-wheelers, the Eastern board reduced the Boston-Portsmouth fare from \$2.00 to \$1.75 in April and to \$1.50 in July. The fare for the Portsmouth-Portland segment remained at \$2.00. Since Portsmouth is only a few miles from Dover on the Boston & Maine line, the B&M began to lose much of its Boston-Dover traffic to the Eastern.³⁸ Meanwhile, the express train between Boston and Portland via the Eastern and PS&P railroads was continued with its fare of \$1.00. Although the use of the express train was permitted by the 1843 contract, the unilateral action of the Eastern directors in lowering the regular fare was contrary to the contract.

With the permission of their stockholders, the Boston & Maine directors proceeded to retaliate. In the spring of 1846 they proposed that the three roads form a pool from which the PS&P would be able to pay 7 per cent dividends and the other two roads 8 per cent with any surplus to be divided equally. Although the PS&P stockholders gave their directors permission to make any contract they thought best, the directors held out for better terms. Nathan Appleton and other Boston & Maine stockholders then quietly obtained a charter to build a railroad between a point in South Berwick and Portland, thus paralleling the PS&P. The York & Cumberland, as it was chartered on July 30, 1846, was authorized to assign its franchise to the Boston & Maine. A few months later, the Boston & Maine directors loaned \$1,700 to the York & Cumberland to commence a survey.

Then came the surprise! The Boston & Maine proposed that the Eastern and the Boston & Maine jointly lease the PS&P for an annual rent of merely 6 per cent of the capital stock with the Boston & Maine and the Eastern dividing the entire surplus, instead of the

³⁸ Correspondence in Portland, Saco & Portsmouth Directors' Minutes, Vol. 1, pp. 210-20; Directors' Minutes of Boston & Maine R.R., Sept. 7, 1844, Mar. 11, Apr. 5, June 21, Aug. 23, 1845; Directors' Minutes of Portland, Saco & Portsmouth R.R., July 28, Aug. 4, 1845.

7 per cent plus a three-way division of surplus originally proposed.³⁹ It was an ultimatum. Either lease at 6 per cent or face ruinous competition from a Boston & Maine extension to Portland. There was enough business for only one road. The PS&P directors, holding out for 8 per cent, had presented statistics to show their road could be expected to earn that amount, but such thoughts were now academic. The PS&P directors presented the lease to their stockholders who reluctantly but almost unanimously accepted it. The Eastern stockholders, likewise, accepted the proposal after being reminded by their directors that neither the Eastern nor the Boston & Maine could afford to engage in a war that could not be localized but, once started, would involve the new roads east of Portland.⁴⁰

THE UNPROFITABLE BRANCHES AND CONNECTIONS

Main-line connections between major population centers had scarcely been completed, much less tested out by operation over a period of time, before feeder branches and connecting links began to multiply. The area north of Boston was dotted with small communities, all envisaging an era of boundless prosperity and expansion that would unfold with the completion of a railroad connection. The temptation to join these communities together and tie them by iron rails to the principal trading centers along the coast was equally irresistible to local civic leaders and to the managers of the Eastern.

The Essex Rail-road

The chartering of the Essex Rail-road Company in March, 1846, was the first of a series of expensive adventures. Essex's franchise permitted the construction of a road from Salem to Lawrence and, of course, attracted the interest of businessmen who desired to re-

³⁹ Stockholders' Minutes of Boston & Maine R.R., Sept. 10, 1845; Directors' Minutes of Portland, Saco & Portsmouth R.R., May 22, 1846; Stockholders' Minutes of Portland, Saco & Portsmouth R.R., June 1, 1846; Act of Me., July 30, 1846, c. 369 (copy in *B&M* . . . [Statutes] II, 83); Directors' Minutes of the Boston & Maine R.R., Oct. 13, Nov. 3, 1846.

⁴⁰ Directors' Minutes of the Boston & Maine R.R., Dec. 4, 1846; Directors' Minutes of the Portland, Saco & Portsmouth R.R., Dec. 30, 1846; Abstract of contract dated Apr. 1, 1847, in *Report of the Committee of Investigation Appointed by the Stockholders of the Boston and Maine Railroad*, May 28, 1849 (Boston: Eastburn's Press, 1849), pp. 75-79; Stockholders' Minutes of Eastern R.R., May 24, 1847; Stockholders' Minutes of Portland, Saco & Portsmouth R.R., Feb. 10, 1847.

vive the Port of Salem,⁴¹ which had been eclipsed by Boston. Such men as Stephen C. Phillips, who owned a wharf and other property in Salem, urged the construction of the Essex line to make Salem a port of trade for the Merrimack Valley.⁴² The Manchester Lawrence Railroad, chartered in 1847, together with the Essex would furnish direct rail transportation from Salem to Manchester, New Hampshire.

The history of the Essex is a lively story of small, inadequately financed businessmen who prevailed upon the Eastern to foot the bill of constructing and operating a line that diverted business from the Boston & Maine at Lawrence. The Essex promoters not only obtained a \$90,000 first mortgage from the Eastern that enabled them to construct the first 4½ miles west of Salem, but also an additional \$71,968 to complete construction to the edge of Lawrence, where a connection was made with the Boston & Maine track. The Eastern board agreed to operate the Essex, signing the contract before construction was completed and thus stimulating subscriptions to Essex stock.⁴³

After 18 months as a leased corporation, a controlling group of Essex stockholders broke with Eastern interests. Directors Stephen Chase and Benjamin Reed, both former officials of the Eastern, resigned and President Cabot was forced out of office. The new Essex board persuaded the Eastern to rescind its operating contract and for a time the Essex struggled along alone, getting deeper into debt and endangering Eastern's investment.⁴⁴ In the autumn of 1851, the Eastern directors resumed their influence over the Essex, again operating the 21-mile road and guaranteeing interest on \$350,000 of ten-year Essex bonds. This was in addition to the original loan which, together with interest, grew to \$257,000 by 1855. There was sufficient business to pay operating expenses but not enough to liquidate the debt. Although the Eastern board preferred to buy the Essex, not until 1864 was the sale completed.⁴⁵

⁴¹ See Charles H. P. Copeland's excellent article on the former prosperity of the Port of Salem in the *American Heritage*, VI (1955), 10-19, 114-15.

⁴² Directors' Minutes of Essex R.R., Aug. 24, 1847.

⁴³ *Ibid.*, Aug. 17, Oct. 8, 1847; Stockholders' Minutes of the Essex Railroad, Sept. 30, 1850. Eastern-Essex contract follows Essex report in Mass. R.R. Returns for 1846, pp. 39-41.

⁴⁴ Annual Report of Eastern R.R., 1849, p. 4; Directors' Minutes of Eastern R.R., Apr. 7, 1849; Stockholders' Minutes of Essex R.R., Sept. 23, 1850; *American Railway Times*, June 19, 1851; The expenditure for a second track between Salem and Danvers (Peabody) in late 1850 added to the debt. *Ibid.*, Dec. 12, 1850.

⁴⁵ Annual Report of Eastern R.R., 1852, p. 7. *Ibid.*, 1864, pp. 9-10; Directors'

Not only was Eastern's relation to Essex expensive but it served to tap the territory of the Boston & Maine, Eastern's erstwhile ally in the struggle with the small roads. Although denied later by an Eastern committee, the fact remains that the Essex did not remain a 4½-mile feeder line but actually served as a crossline that, because of Eastern's financial assistance and operating contracts, siphoned traffic from the Boston & Maine.⁴⁶

South Reading, Saugus Branch, and Grand Junction Railroads

The Eastern's territory, in turn, was threatened by a newcomer, the South Reading Branch Railroad, chartered on April 26, 1848.⁴⁷ It was hotly debated whether Boston & Maine was behind this move. Promoted by Edward Crane of Haverhill and David Pingree of Salem, the only large stockholders,⁴⁸ the South Reading Branch was incorporated to build between South Danvers (now Peabody) on the Essex line and South Reading (now Wakefield) on the Boston & Maine. The charter permitted the South Reading to send its cars over the Essex at one end and over the Boston & Maine at the other. Consequently, when the new road was opened in September, 1850, it diverted Eastern's business between Boston and Salem. Since it was business that the Eastern could not afford to lose, the Eastern directors by the clever use of a legal loophole prohibited all trains from entering Salem over the Essex track, including the trains of the South Reading Branch.⁴⁹ The Massachusetts legislature came to the rescue of the little roads, however, and granted them not only specific permission to enter Salem but also the use of the Eastern's tracks.⁵⁰ The nuisance value of the South Reading Branch can be measured by the fact that 82 per cent of its passen-

Minutes of Eastern R.R., Feb. 19, 1852. When purchasing the Essex, the Eastern became obligated to redeem \$214,400 bonds held by owners other than the Eastern Railroad.

⁴⁶ *Report of the Investigating Committee of the . . . Eastern . . .*, 1855, p. 8. It would appear that the decision to enable the Essex to reach Lawrence probably was made by the Eastern management not later than Oct., 1847. See Directors' Minutes of Essex R.R., Aug. 17, Oct. 8, 1847.

⁴⁷ *Act of Mass., Apr. 26, 1848, c. 204* (copy in B&M . . . [Statutes], III, 145-46).

⁴⁸ Directors' Minutes of South Reading Branch R.R., Aug. 21, 27, 1849, Jan. 1, Mar. 2, 1850; *American Railway Times*, Sept. 5, 1850.

⁴⁹ See letter from N. I. Lord to the Essex R.R., Aug. 26, 1850, in the Directors' Minutes of the Essex R.R., Aug. 27, 1850, and a letter of Essex directors to Supt. Merritt in *ibid.*

⁵⁰ *Ibid.*, June 13, 1851.

ger receipts was derived from business diverted from the Eastern.⁵¹ The sum, \$36,070 in 1851, was not large, but it equalled 7 per cent of Eastern's annual operating revenue.⁵² Before the Eastern directors turned to a more certain solution of the South Reading Branch problem they were faced with a serious threat from the Saugus Branch Railroad Company.

In the spring of 1848, after three years of opposition from the Eastern Rail-road, David Pingree of Salem and other promoters had obtained a charter for the Saugus Branch Railroad to connect Malden, on the Boston & Maine Railroad, and Sweetser's Mills (in Saugus), which was only a short distance from the Eastern Railroad station in Lynn. The Saugus Branch was a real threat to the Eastern since it, together with the Boston & Maine south of Malden, could divert at least one-half of Eastern's traffic between Lynn and Boston, thereby reducing Eastern's annual revenues another \$24,500.⁵³ The loss of business to the South Reading and the proposed construction of the Saugus Branch aroused President David A. Neal of the Eastern in 1851 to proclaim publicly that the Eastern had been⁵⁴

obliged to endure opposition . . . from parties, who, like the filibuster army of Cuba, if defeated, lose nothing but an organization, that the next season renews, and if successful, gain nothing but the spoilage of those who have done them no injury. Such has been the character of the contest waged in our Legislative halls for the last eight years, having for its object, or at least its sure result, the deterioration of the property of one party, accomplished only by what must prove a certain loss to the other. This destruction of Rail-road property by building a competing route is like sinking an enemy's ship with golden balls.

Neal proposed a solution designed to capture the control of the Saugus Branch. He suggested that the Eastern or its directors pay a \$20 assessment on a number of delinquent Saugus Branch shares in return for proxies that could be used to outvote Edward Crane, the leading stockholder, and thus assure the lease of the Saugus Branch's "strategic franchise."⁵⁵ His plan envisioned an all-rail line

⁵¹ Computed from Annual Report of South Reading R.R., 1851, p. 7; Annual Report of Eastern R.R., 1850, n.p., and 1852, p. 9.

⁵² *Ibid.*

⁵³ Computed from Annual Report of Eastern R.R., 1850, n.p., 1851, p. 9, and Directors' Minutes of Eastern R.R., July 19, 1851. Of course, the seriousness of this threat depended upon the willingness and ability of Pingree and others to build the Saugus and compete with the Eastern.

⁵⁴ *Special Report of the President . . . of the Eastern . . . August 28, 1851*, p. 8.

⁵⁵ Directors' Minutes of Eastern R.R., July 19, 1851. "Strategic charter"

to downtown Boston rather than the use of the ferry from East Boston, which many persons denounced as inadequate.⁵⁶ He would use the Saugus Branch and either trackage rights over the Boston & Maine or a new track between Malden and Boston. This would require the permission of the legislature, and Boston & Maine's influence might have been too strong to obtain such authority. The Eastern directors preferred another arrangement involving the use of the Saugus Branch plus a short connecting track, and the tracks of the Grand Junction Railroad & Depot Company, a small belt line in the Boston area.⁵⁷ In July (1851), the board rejected Neal's plan and instead proceeded to purchase Crane's interest not only in the Saugus Branch, but also the South Reading Branch and the Essex railroads at a high figure.⁵⁸

The Eastern immediately took over the operation of the South Reading Branch and proceeded to "dry it up." The state legislature, however, by virtue of its power to authorize railroad leases and stock control, required the daily operation of one freight and four passenger trains, even though it meant an out-of-pocket loss and diverted business from Eastern's main line.⁵⁹

The construction of the Saugus Branch⁶⁰ and an additional track of 6.44 miles to connect with the Grand Junction for an entrance to Boston, first used on April 10, 1854, also was quite expensive, amounting to \$778,304. In addition, the Eastern guaranteed

was a term openly used in legislative debate during this generation to describe a franchise such as the one held by the Saugus Branch. *Fourth Annual Report of Board of Railroad Commissioners* [Mass.] (Boston, 1873), p. 19.

⁵⁶ E.g., see the strong defense of the ferry route in "Railways of Massachusetts," by "Massachusetts" in *Boston Transcript*, May 7, 1855. The debate over Eastern's ferry route was very spirited. Sometimes forgotten was the fact that the original location by Fessenden over the marshes to East Boston was initially selected because a large part of it was free from objectionable curves and elevation and less likely to be drifted with snow. *Boston Advertiser & Patriot*, Dec. 30, 1837, Jan. 14, 1839.

⁵⁷ Originally incorporated as the Chelsea Branch Railroad Company in 1846. After its reorganization as the Grand Junction the next year the Eastern subscribed \$100,000 or $\frac{1}{2}$ of the stock. The company had 30 acres of depot ground and wharves in East Boston. *American Railway Times*, Dec. 4, 1851.

⁵⁸ *Report of Investigating Committee of Eastern Railroad*, 1855, pp. 9-11. Edward Crane sold his South Reading stock at 110 and the Saugus stock at 80. *Ibid.*

⁵⁹ *Ibid.*, p. 10. The Mass. legislature made this requirement as a condition in granting permission to the Eastern to lease the South Reading and control its stock. Act of Mass., May 2, 1852, c. 305 (copy in *B&M . . . [Statutes]*, III, 152-54.)

⁶⁰ On Feb. 1, 1853, 8.4 miles were opened for business. *Annual Report of Eastern R.R.*, 1853, p. 4.

Grand Junction bonds for \$131,000 which later proved worthless.⁶¹ The entire project of a new entrance into Boston had to be financed with borrowed money since the legislature authorized the issuance of additional capital stock only on condition it be sold at par, an impossibility in 1853-55.

The Danvers Railroad Affair

Meanwhile, the managements of the Eastern and the Boston & Maine clashed over their relation with the Danvers Railroad. Three small railroad corporations were involved: the Newburyport, the Danvers & Georgetown, and the Danvers. The Newburyport independently constructed a 15-mile crossline between the Eastern and the Boston & Maine by September, 1851. The Danvers & Georgetown, chartered on May 5, 1851, would parallel the Eastern by connecting the Essex and the Newburyport railroads. There was no real future for this project until the Danvers & Georgetown directors obtained a charter for the Danvers Railroad on March 15, 1852,⁶² to provide a connection with the Boston & Maine at the South Reading station.

The combination of the Danvers, the Danvers & Georgetown, and the Newburyport railroads was then urged upon the Boston & Maine to enable it to siphon some of Eastern's Newburyport-Boston traffic. Of course, it would be to the interest of the Eastern to prevent such an occurrence by leasing the middle link, the Danvers & Georgetown Railroad. The effort to play the B&M and the Eastern against each other fell flat, for the time being, because President Albert Thorndike of the Eastern and President Southworth Shaw of the Boston & Maine agreed that neither road would assist the Danvers & Georgetown.⁶³

Undaunted by this gentlemen's agreement between Thorndike and Shaw, W. D. Northend and other promoters of the Danvers and the Danvers & Georgetown proceeded to put more pressure upon the Boston & Maine. They obtained enough funds from small investors to build the Danvers & Georgetown. The Newburyport and the Danvers & Georgetown threatened to obtain the co-operation of the Essex Railroad and drain B&M's business at Haverhill and Bradford to the Eastern Railroad at the stations of Newbury-

⁶¹ *Report of Investigating Committee of Eastern Railroad*, 1855, pp. 10, 33.

⁶² Annual Report of Danvers & Georgetown R.R., 1853, p. 2.

⁶³ *Ibid.*, 1853, pp. 2-3; Stockholders' Minutes of the Boston & Maine R.R., Sept. 8, 1852; Annual Report of Boston & Maine R.R., 1853, p. 6.

port and Salem. Northend and his associates offered to remove this threat only for a high price. After some negotiation over the terms of the ultimatum, the Boston & Maine leased the Danvers Railroad at 5 per cent of its capital stock for 100 years. In a parallel agreement, the Danvers, the Danvers & Georgetown and the Newburyport railroads agreed to run through trains, hauling any Boston & Maine cars and refusing all Eastern and Essex cars.⁶⁴

Immediately, there was a public verbal battle between the two major roads, the directors of each using their annual reports to the stockholders to declare that the other corporation had deliberately encroached upon their territory and had failed to engage in "reasonable competition."⁶⁵

The Boston & Maine board defended its capitulation as justifiable protection against Eastern's friendliness to four other short-line railroads, the Essex, the Saugus Branch, the Portsmouth & Dover, and the Great Falls & South Berwick Branch.⁶⁶ The Eastern, on the other hand, denounced the Boston & Maine for violating the gentlemen's agreement not to aid smaller roads without the consent of the other major road. The B&M board replied that there had been no breach of faith or any act of "injustice, unkindness or courtesy" because the construction of the Danvers & Georgetown, without the aid of either major road, had cancelled the oral agreement between the managements of the Boston & Maine and the Eastern.⁶⁷

The chief significance of the Danvers affair was not the display of open rivalry of the two major roads, but the use of the Danver's lease by the Boston & Maine as a means of finally persuading the Eastern to divide the competitive portions of its business rather

⁶⁴ Annual Report of Boston & Maine R.R., 1853, pp. 5-6; copy of lease dated May 27, 1853, in *Report of the Investigating Committee of the Boston and Maine Railroad, to the Stockholders, September 29, 1855* (Boston: Dutton & Wentworth, 1855), pp. 48-50, 53-55.

⁶⁵ Annual Report of the Eastern R.R., 1853, p. 6; Annual Report of the Boston & Maine R.R., 1853, p. 6.

⁶⁶ *Ibid.*, 1855, p. 12. The Portsmouth & Dover, not yet built, was projected as an extension of the Cochecho Railroad and if constructed could divert much of Cochecho's interline traffic that was going over the Boston & Maine. The Cochecho was opened in sections from 1849 to 1851 and terminated at Alton Bay on Lake Winnipesaukee. The project of the Great Falls & South Berwick Branch, not yet constructed, had been revived as an extension of the Great Falls & Conway which had had assistance from the Boston & Maine and served as a feeder to the Boston & Maine. When constructed, the Great Falls & South Berwick Branch would divert business from the Boston & Maine.

⁶⁷ Annual Report of the Eastern R.R., 1853, p. 6; Annual Report of the Boston & Maine R.R., 1853, p. 6, and 1855, p. 11.

than wage a war. This pooling agreement was initiated by the B&M directors in spite of the fact that a majority of the stockholders refused to pass a resolution "to cultivate friendly relations with the Eastern." In a series of meetings the directors of the two roads considered their problems arising from competition and even discussed the possibility of consolidating the two corporations. They found fewer impediments than expected. Passenger revenues on the two roads were about equal and would offer no difficulty as a basis for a union, but no agreement could be reached concerning the freight revenues, which were much greater on the Boston & Maine. After several months of fruitless discussions, Boston & Maine directors proceeded to finance the construction of the Danvers and also extend some aid to the Danvers & Georgetown. Now being in position to divert some of Eastern's valuable business by means of the new crossline, the Boston & Maine directors again approached the Eastern and this time succeeded in obtaining a contract to reduce competition.⁶⁸

By a contract of July 14, 1855, the two roads agreed that either road doing business outside of specified territories would refund to the other road all receipts after deducting expenses, which were agreed to be three-fourths of one cent per passenger-mile or ton-mile and 20 cents per ton for depot charges. Traffic between Boston and a few named stations located on the crosslines connecting the Boston & Maine and the Eastern was available to either road on equal terms. The road doing that business was permitted to keep one-half of the net revenue. In this agreement, the Danvers was considered part of the Boston & Maine system whereas the Saugus Branch and the Essex were regarded as part of the Eastern system.⁶⁹

Great Falls & Conway and Great Falls & South Berwick Branch Railroads

The Eastern railroad spent considerable sums aiding two small roads in New Hampshire, where the Eastern first directly confronted

⁶⁸ Cf., *A Short Review of the Minority Report of the Directors of the Boston and Maine Railroad, made September 1, 1856*, p. 10. Stockholders' Minutes of Boston & Maine R.R., Sept. 14, 1853; *American Railway Times*, Mar. 16, 1854; Directors' Minutes of Boston & Maine R.R., Nov. 25, 30, 1853, Feb. 22, June 14, Nov. 18, Nov. 24, Dec. 12, 1854; *Report of the Investigating Committee of the Boston and Maine . . . September 29th, 1855*, pp. 5 ff.

⁶⁹ Agreement between Boston & Maine and Eastern railroads, dated July 14, 1855. A copy follows the report of the Eastern Rail-road in the Mass. R.R. Returns for 1855, pp. 78 ff. Traffic over the Essex R.R. between Lawrence and Salem was not included in this agreement.

the Boston & Maine as a rival. In 1841, while both the Boston & Maine and the Portland, Saco & Portsmouth were under construction, a charter was issued for the Great Falls & South Berwick Branch Railroad to connect the PS&P (under Eastern's influence) and the new mills at Great Falls, now known as Somersworth. This project, opposed by the Boston & Maine, was set aside by the agreement of 1843, in which the Boston & Maine promised to build a branch to Great Falls. The three-mile branch constructed by the Boston & Maine in 1843, however, did not satisfy the Eastern because it connected with Boston & Maine's main line in New Hampshire rather than with the B&M terminus at South Berwick, Maine, which was also a station on the Portland, Saco & Portsmouth.⁷⁰ Even though this meant none of the business at Great Falls would be routed to the PS&P and the Eastern, the directors of the Eastern did not take any action for a number of years.

In 1849 a new railroad, the Great Falls & Conway, was partially opened. Although the roadbed and buildings were financed and constructed independently, the Boston & Maine furnished the rolling stock and agreed to operate it. Since the Great Falls & Conway served as an extension of the Boston & Maine branch to Great Falls, the traffic from the White Mountains area at Conway was carried by the Boston & Maine. In 1848, the local residents in the Great Falls area obtained a renewal of the unused charter for the Great Falls & South Berwick Branch Railroad Company. The Eastern immediately lent its support to this crossline with a stock subscription and a bond guarantee, with the obvious intention of encouraging the projected Great Falls & South Berwick to draw business from the Great Falls & Conway rather than permitting that business to be handled by the Boston & Maine. Such a development seemed possible because the Great Falls & Conway directors had become dissatisfied with the Boston & Maine operation of their little road and after a few months had bought their own rolling stock and begun to operate independently.⁷¹

Although the Boston & Maine again protested Eastern's assistance to the Great Falls & South Berwick, the crossline was finally

⁷⁰ Directors' Minutes of the Boston & Maine R.R., Nov. 23, Dec. 14, 20, 1841, Mar. 15, 1842; *Report of the Investigating Committee of the Eastern Railroad, 1855*, pp. 6, 13.

⁷¹ Directors' Minutes of the Great Falls & Conway R.R., Apr. 6, May 16, 1848; copy of contract in *Investigation . . . of Boston & Maine, 1849*, pp. 73-74; Directors' Minutes of Eastern R.R., Apr. 24, 1841, Apr. 4, Nov. 2, 1842, Dec. 26, 1843, Sept. 24, 1853, June 15, 1854.

opened on February 5, 1855, and operated by the Great Falls & Conway directors, who were very optimistic that their road would become a great avenue into the heart of the White Mountains.⁷² The Eastern directors encouraged that hope, anticipating that much of the White Mountains traffic would enter Boston over their road rather than the Boston & Maine.

The subscription to the stock in the Great Falls & South Berwick Branch and the guarantee of bonds on both Great Falls roads soon totaled \$209,500. The stock proved to be worthless, the Eastern had to pay much of the interest on the bonds, and the traffic from the White Mountains was meager.⁷³

The several adventures involving the Essex, the South Reading, the Saugus Branch, and the two Great Falls railroads added nearly \$2,000,000 to Eastern's obligations in the eight years ending in 1855.⁷⁴ The contest with the Boston & Maine over the Danvers did not add seriously to Eastern's debt. Instead, the pooling agreement of 1855 which grew out of that situation aided Eastern financially by eliminating costly competition.

DEVELOPMENT OF A CRISIS

In 1847 the Eastern Railroad had appeared to the public to be a strong and well-managed road. The main line of owned and leased track extended between Boston and Portsmouth, nearly 54 miles. The road was single track except for a few miles between Chelsea and Salem where a second track was laid by the new method of the rails resting directly on kyanized timber.⁷⁵ The only important branch line in operation extended to Marblehead, although additional branches to Gloucester and Salisbury were under construction and were opened within a few months.⁷⁶ The Gloucester branch proved to be a good investment but the Salisbury did not quite pay for itself the first decade.⁷⁷

⁷² "First Annual Report of Directors of Great Falls & South Berwick Branch Railroad to the Stockholders, May 1, 1854" (MS copy). Cf. Annual Report of Eastern R.R., 1875, p. 24.

⁷³ *Report of Investigating Committee of Eastern Railroad, 1855*, pp. 11-12.

⁷⁴ Computed from Annual Report of Eastern R.R., 1875, pp. 44-45.

⁷⁵ Annual Report of Eastern R.R., 1847, p. 2.

⁷⁶ In addition, there was the Wenham Pond Branch of 2,100 feet which had been constructed in 1843-44 for the transportation of ice. *Boston Advertiser and Patriot*, Dec. 6, 1843. The branch from Beverly to Gloucester, 12.9 miles, was opened Nov. 1, 1847. The branch from Salisbury to Amesbury, 3.78 miles, was opened Jan. 1, 1848. Both branches were constructed at the request of local residents.

⁷⁷ *Report of Investigating Committee of the Eastern Railroad Company*,

The depots of the Eastern were not unduly costly and only those at Salem and East Boston were among the larger depots of the day. The original depot in Salem was replaced in 1847 with a structure that had an imposing granite façade patterned after the medieval gates of the older European cities. It was only recently razed. President David A. Neal, who had toured England, is said to have been responsible for the design of the building. The Salem depot by the late forties was a busy place with 60 trains arriving and departing daily.⁷⁸

Eastern's financial condition was unquestioned. On the Boston Exchange its stock was selling between 103 and 113 $\frac{1}{4}$.⁷⁹ With an investment of \$2,937,207 and annual operating revenues of \$424,841, the company was paying dividends of 8 per cent and had a total accumulated surplus of \$135,916.⁸⁰ In 1847, the surplus had been increased by \$46,157, according to the report to the stockholders, although actually the amount was \$11,513. It was the policy to charge certain items *directly* to surplus rather than to operations, a practice sometimes followed on other railroads. The current ratio on June 30, 1847, however, was far from good; there were only 32 cents of current assets for every dollar of current liabilities. While 45 cents of net income were derived from every dollar of revenue, about 93 per cent of the net income was paid as dividends, leaving only a small amount available to help finance the normal growth of the company.⁸¹

The directors used extreme measures the next few years to keep up the reputation for financial strength hitherto enjoyed by the company. In 1848 it was necessary for them to dip into accumulated surplus to pay the customary 8 per cent dividend, although they claimed the earnings exceeded the dividends paid and presented an elaborate table the following year to prove their point.⁸²

The year 1849 brought some relief, with \$26,714 actually added

July 30th, 1855 (Boston: C. C. P. Moody, 1855), p. 7; Annual Report of Eastern R.R., 1850, p. 10.

⁷⁸ *Ibid.*, 1847, p. 2; Bradlee, *Eastern Railroad . . .*, p. 35.

⁷⁹ *Ibid.*, 102, gives annual list of stock prices.

⁸⁰ Based upon a statistical study of 15 New England railroads, 1835-1900, which we have prepared in connection with a forthcoming volume on the history of the Boston & Maine Railroad.

⁸¹ Computed from the 1847 annual reports to the stockholders and to the Mass. legislature.

⁸² Annual Report of Eastern R.R., 1849, p. 5.

to the surplus.⁸³ The paid-in capital stock of \$2,225,000 in 1847 had increased to \$2,850,000 and the total debt had risen from \$1,022,221 to \$1,072,753 during the same two-year period. The directors attempted to allay any fears about the increasing indebtedness, maintaining that it was only nominally large and that the debt was offset by an adequate amount of assets. The book value of the assets, however, especially investments in other roads and real estate, was listed above the current market value.⁸⁴

The years 1850-52 brought great difficulties, culminating in a very critical situation in July, 1853. Obligations resulting from the control of several branch roads described below began to weaken the Eastern, although the public did not realize the full situation. The net railway operating revenue dropped from \$316,418 in 1849 to \$209,455 the next year in spite of a small increase in the gross operating revenues. Expenses were unusually large because of extra maintenance necessitated by the apparent neglect of previous years.⁸⁵ Heavier rails on an increased number of sleepers were laid for nearly the entire length of the main track. Furthermore, the first large and serious accident in the road's history occurred on November 3, 1848, at Salem, killing 6, injuring 62, and costing Eastern between \$200,000 and \$300,000 in damages and claims.⁸⁶ These costs, plus certain renewals, were charged to surplus. Thus, the management reported a figure for "net earnings after deducting expenses" which detracted attention from the true net operating revenues.⁸⁷ In 1852 the dividend payments were decreased to 7.5 per cent. During 1850-52 the amount paid for dividends exceeded the net income available after fixed charges.⁸⁸ Continuing a recapitulation according to present-day definitions, it is evident that the total accumulated surplus dropped from \$156,851 in 1849 to a

⁸³ At the same time, however, the floating debt was increased \$253,313. The precise use of these funds is uncertain. They may have been used for the branches and connections described in the preceding section of this article.

⁸⁴ This fact was recognized, but only briefly, by Francis B. Crowninshield, chairman of a stockholders' investigating committee, the next year. See *Report of the Investigating Committee of Eastern, 1850*, p. 2.

⁸⁵ Cf. "Railways of Massachusetts," by "Mass.," *Boston Transcript*, May 7, 1855.

⁸⁶ Charles W. Felt, *Eastern Railroad of Massachusetts: Its Blunders, Mismanagement, and Corruption. No. 2* (Boston: Wright & Potter, Printers, 1874), p. 7. Cf. *Special Report of the President to the Directors of the Eastern Rail Road Company, and Published for the use of the Stockholders, August 28, 1851* (Salem: Observer Office, 1851), p. 5.

⁸⁷ Mass. R.R. Returns for 1848, p. 59.

⁸⁸ Interstate Commerce Commission definition. See note 80, above.

deficit of \$465 by December 31, 1852.⁹⁰ Furthermore, in 1852 there were only 16 cents of current assets for every dollar of current liabilities.⁹¹

During the fiscal year of 1852-53 the need for cash was still critical, even though the Eastern had increased its bonded debt from \$500,000 to \$1,210,000, with Baring Brothers of England marketing many, if not most, of the bonds. The threat of bankruptcy was averted by Samuel Hooper who raised an additional loan of \$650,000, enabling the management to meet increasing obligations related to the several small roads the Eastern was attempting to control.⁹²

Eastern's continued financial difficulties led to a management crisis in 1855. The directors sought to relieve the situation by keeping dividend appropriations within the amount of net earnings (the modern definition). The dividends were reduced to 6 per cent in 1853 and to 3 per cent in cash plus 4 per cent in East Boston Ferry stock in 1854. With the decline of cash dividends the stock dropped on the market from 90 to 43.⁹³ The next two semiannual dividends were passed, yet the total indebtedness continued to increase and by June, 1855, exceeded the paid-in capital stock.⁹⁴ Much of the debt was refunded into several series of bonds, maturing between 1855 and 1864, and sold for an average of 83 $\frac{1}{2}$.⁹⁵ Although this action increased the current ratio so that there were 47 cents of current assets for every dollar of current liabilities, a considerable improvement over 1852,⁹⁶ the fact remained that Eastern's total debt had rapidly increased and was \$1,927,516 more than it had been in 1847. This situation impressed the stockholders, especially

⁹⁰ The deficit of \$465 was not shown because \$6,000 of "estimated depreciation beyond renewals" in 1846 was not deducted from the surplus as it was in succeeding years. Mass. R.R. Returns for 1846, p. 34.

⁹¹ Computed from the 1852 annual reports to the stockholders and to the Mass. legislature.

⁹² Hidy, *House of Baring* . . . , pp. 416, 428-29; Directors' Minutes of Eastern R.R., July 29, 1852, July 20, 1853; Annual Report of Eastern R.R., 1854, p. 11. C. W. Felt, *Eastern* . . . No. 2 (1874), p. 7, stated that the loan arranged by Hooper saved the railroad from bankruptcy.

⁹³ Bradlee, *Eastern Railroad*, 102.

⁹⁴ In comparison to all the railroads in the U.S. in 1855 which had capital stock exceeding total bonded indebtedness by 42 per cent, the Eastern had capital stock exceeding bonded debt by only 18.4 per cent. William Z. Ripley, *Railroads, Finance and Organization* (1927), p. 10.

⁹⁵ Directors' Minutes of Eastern R.R., Dec. 7, 1854.

⁹⁶ Computed from the 1855 annual reports to the stockholders and to the Massachusetts legislature.

when it was revealed that part of it was the result of an embezzlement.

On June 28, 1855, the Eastern directors were shocked when their treasurer, William S. Tuckerman, volunteered the information that he had embezzled about \$250,000 during the past nine years.⁹⁶ Each year his books had been audited by outstanding businessmen who approved the accuracy and completeness of his records with such laudatory phrases as "a model system eminently worthy of imitation by other roads."⁹⁷ Tuckerman's several fraudulent practices included the overissue of stock, overissue of notes payable, considerable use of the company's cash, and unlawful pledging of the company's notes. His actions were facilitated not only by Eastern's policy of maintaining deposits in seven banks and the use of treasury offices in both Salem and Boston, but by inadequate annual audits. It is almost unbelievable that the auditors did not check the loose memoranda substituted for a cash book or actually add the entries in the stock ledger or on the dividend sheets. The various auditors, aware of Tuckerman's reputation for completeness and honesty, had allowed him to assist in the audit by reading to them from the books, although actually he voiced figures not recorded. A stockholders' investigating committee was so impressed it commented that "mayors and lawyers, merchants and accountants have been alike deceived. Is it too much to add, that the blind have led the blind and all have fallen into the ditch together?"⁹⁸

Tuckerman's dishonesty was an exception among the higher railroad officials of that day. For the first generation of railroad management, evidence indicates there was little dishonesty other than the petty type practiced by some conductors and an occasional ticket seller or wood agent. The only other noticeable difficulty of the Eastern at that time was the case of Thomas D. Dalton, a freight agent who defaulted some \$5,000.

The final loss from Tuckerman's embezzlement was \$232,203. This sum, while spectacular in absolute terms, was actually equivalent only to about one-eighth of the increase in Eastern's indebtedness since 1847; there were more fundamental causes for the developing crisis in the affairs of the company. Stockholders were aroused not only by the Tuckerman affair, but also by manage-

⁹⁶ Annual Report of Eastern R.R., 1857, p. 10.

⁹⁷ *Ibid.*, July 9, 1849.

⁹⁸ *Report of the Investigating Committee of the . . . Eastern . . . 1855*, p. 17.

ment's policies regarding several of the smaller roads. Approximately one-half of the increase in Eastern's debt from 1847 to 1855 was the result of a "readiness to promote unprofitable branches and connections,"⁹⁹ for the acquisition of which many observers felt more had been paid than was justified by the returns realized. The remainder of the increase of indebtedness came from expenditures for an all-rail entrance to Boston.

The responsibility for the events of 1847-55, especially Tucker-
man's embezzlement, rests to some extent upon the loose organization of the Eastern. While David Neal had an excellent reputation as president, he was only one member of the triumvirate that ran the road. The president, treasurer, and superintendent, each had distinct spheres of authority and for practical purposes were responsible directly to the board. The directors, successful in their own businesses, did not realize that a railroad president should be given full authority as a chief executive and be responsible for the treasurer's and superintendent's actions.¹⁰⁰

A stockholders' investigating committee, prompted by Tucker-
man's admission of fraud in 1855, urged several reforms: designat-
ing the president as the chief executive, bonding all employees
handling money, reorganization of the treasury, closing the con-
struction account, neither building nor aiding a branch road with-
out the previous consent of the stockholders, and selling all avail-
able real estate to obtain funds to help liquidate the debt. These
and other recommendations were adopted by the stockholders, who
admonished the directors that they should not expect to excuse
themselves "from at least a heavy moral responsibility" in cases of
"great and palpable mistakes" that were characteristic of the past
decade.

THE EASTERN AND THE BOSTON & MAINE

The situation of the Eastern Rail-road Company in 1855 may be appraised by comparing the result of its development with that of the Boston & Maine. Whereas the Boston & Maine built an inland route, the Eastern skirted the coast line, linking Salem, New-
buryport, Portsmouth, and Portland to the growing metropolis of Boston. When the road was located, these towns were the most pop-

⁹⁹ Annual Report of Eastern R.R., 1856, p. 4.

¹⁰⁰ David Neal's manuscript autobiography in the library of Essex Institute does not reveal whether this was a reason he left the Eastern to take a position on the Michigan Central Railroad.

ulous communities east of Lowell and furnished a relatively large amount of passenger business, which was quite remunerative.¹⁰¹ Eastern charged higher passenger fares than the other railroads, except for enumerated stations at which Eastern and the Boston & Maine agreed upon equal rates.¹⁰² Eastern's all-rail entry into Boston, opened in 1854, improved its bid for the passenger business, and the competing fast trains to Portland attracted most of the passengers from the boats.

Nevertheless, a change in Eastern's position was evident by 1854. Until 1847, the volume of Eastern's business exceeded that of the Boston & Maine, but after that date the rapid development of Lawrence and other interior towns, along with the superior management of the Boston & Maine, enabled that road to surpass the Eastern. The following statistics show the competitive situation in 1854.¹⁰³

| | Eastern | Boston & Maine |
|---|-----------|----------------|
| Miles of road operated | 77 | 84 |
| Passenger-miles per mile of road operated | 209,398 | 340,068 |
| Ton-miles per mile of road operated | 37,842 | 109,461 |
| Passenger revenue | \$443,491 | \$552,843 |
| Total railway revenue | \$730,270 | \$906,790 |
| Net income after fixed charges | \$272,078 | \$366,666 |

On several important occasions, the Eastern management's decisions differed from those of the Boston & Maine. Whereas the Eastern replaced its ferry entrance to Boston with an all-rail route in the fifties, the Boston & Maine, originally an independent branch of the Boston & Lowell, had constructed its own track into Boston in 1844-45 and wisely developed the commuter traffic, thereby contributing to its net income. Eastern's all-rail route into Boston was not only a later accomplishment but its construction included the expensive purchase of the Saugus Branch. Eastern's efforts to develop its freight and passenger business were costly. Tapping the Boston & Maine territory with the Essex Railroad and reaching into the White Mountains with the two Great Falls roads for a con-

¹⁰¹ E.g., see statements by D. M. Balfour in *American Railway Times*, May 31, 1855, by Joel W. White in *ibid.*, Feb. 28, 1856, and an unnamed commentator in *ibid.*, May 29, 1856. Balfour maintained that in 1854, the freight expenses, if realistically computed, exceeded the freight revenues on the Eastern, the Boston & Maine, and the Fitchburg railroads.

¹⁰² The level of fares is reflected in the average revenue per passenger-mile which we have computed for 15 New England railroads. See note 80, above.

¹⁰³ Based on annual reports to stockholders and to the Mass. legislature and adjusted according to present I.C.C. standards.

nection with the unbuilt Portland & Ogdensburg were expensive and did not appreciably benefit the Eastern. The Boston & Maine met the low rates of the Essex,¹⁰⁴ and traffic on the Great Falls route was very small. The Boston & Maine, on the other hand, resisted the temptation to finance three smaller roads, the Manchester & Lawrence, the Cochecho, and the Great Falls & Conway railroads.¹⁰⁵

Another noticeable feature of the Eastern was the practice of extending financial assistance to other roads by contracting both short-term and funded debt. Furthermore, nearly one-fourth of the cost of Eastern's main line (in Massachusetts) had been built with borrowed money. The Boston & Maine, on the other hand, used equity financing almost exclusively. By 1854, the two roads compared as follows in regard to stock and debt:¹⁰⁶

| | Eastern | Boston & Maine |
|-----------------------|-------------|----------------|
| Capital stock paid in | \$2,850,000 | \$4,076,975 |
| Total debt | 2,850,325 | 150,000 |
| Miles of road owned | 60 | 83 |

In 1855, a board of directors, most of whom were new to the Eastern, and several new officials took over the management. What they tried to do and the succeeding events of Eastern's history will be discussed in a following article.

¹⁰⁴ To be described in a following article.

¹⁰⁵ Research in progress documents this point.

¹⁰⁶ Based on annual reports to the Mass. legislature.

NOTE: "The Eastern Rail-road Company, 1855-1884" will appear in the Summer, 1957, *Business History Review*.



BOOK REVIEWS

Enterprise in Oil: A History of Shell in the United States. By Kendall Beaton.
New York, Appleton-Century-Crofts, Inc., 1957. Pp. xiii + 815. \$7.50.

Within the confines of a single volume, albeit one of some 800 pages, Beaton has presented the story of the origin and development of the Shell Oil Company, its predecessor and subsidiary companies in the United States. It is an important story that covers over forty years of dynamic growth and achievement. The task of telling such a story has required nearly ten years of research and writing by the author; his extensive list of sources and acknowledgments give some idea of the magnitude of his research.

As to what manner of book Beaton has written in *Enterprise in Oil*, his own brief preface seems to provide the best indication. Feeling that an enterprise that began as recently as 1912 was too close for judicious appraisal, the author has tried to, "stick to the facts and avoid unnecessary historical judgments. . . ." He considers the book an "official" portrait in that the company willingly sat for the artist, allowing him full access to the records and the assistance he needed, but it does not necessarily endorse the result. In addition to his immediate aim of telling the facts of the Shell story, the author feels the book's purpose will be amply fulfilled if it can assist some future historian in reaching a better appraisal of the Shell companies and their place in the American scene. Toward those ends, for both the present and the future, the author has done a most commendable work. He has, indeed, written a highly factual book, and it is a tribute to his skill and diligence as a writer and researcher that, though he has worked with a prodigious amount of detail, the book has a clarity and pace that make it completely readable. In those sections where he is able to work with broader strokes, Beaton displays a particularly pleasing literary style. It follows, of course, that in sticking to the facts, at times being something of a researcher's researcher, the author has met the second criterion of a good book, he has written a useful book.

In addition to his own abilities, Beaton has had the benefit of an exceptionally interesting story to write, not only because of the times and the success of Shell in the United States, but because of the influence of its Dutch and English lineage. He has started his narrative with background material on some of the first discoveries and uses of petroleum, a brightened-up account of the Drake well, and the beginnings of the Royal Dutch-Shell. With the scene thus prepared, the American Shell story starts in 1912 when the long-contemplated plan of Sir Henri Deterding to enter the United States began to take form. The roots of today's billion dollar company originally went down in the form of two separate companies, one centered in San Francisco, the other in Tulsa, Oklahoma, later St. Louis, Missouri. The Shell of California began as a marketing organization for the Group's Sumatra gasoline, later buying into California production for its supply. In Tulsa, the purchase of producing properties was the primary goal and, with the acquisition of a number of small producing companies, the Roxana Petroleum Company was established. By 1920, both young companies had achieved integration, but Shell had yet to make a "visible impression" on the American public. The spectacular growth of the 1920's was to change that situation. During the great marketing expan-

sion, Shell moved at breakneck speed with the rest of the industry, building stations, establishing jobber contracts, and buying other marketing companies. The acquisition of a New England company put Shell on the East Coast, and by 1930, Shell was marketing in 48 states. Pressure to feed the big expansion had Shell producing or holding leases in practically every oil district in the country and operating nine refineries. During this period Shell adopted the Dubbs cracking process and experimented with several others. It may be pointed out here that in all technical matters Beaton provides the reader with an extraordinary amount of background information and explanation, a practice which undoubtedly will spare many a student the tedious task of doing additional technical research.

The "era of Golden Volume," of course, was not to last. In 1930 the full impact of the depression hit, and from that date, Mr. Beaton's story turns on what Shell did in that difficult period after its tremendous expansion on the crest of a boom at boom prices. This third period of the story actually divides into two sections. The first five years of the 1930's were spent in weathering the storm. Retrenchment, refinancing, economy committees, reorganization, cutbacks in personnel, all were the order within the company. In the industry it was a time of conservation, the NRA, the Iowa Plan, and the "jungle of throat-cutting," as the author calls the bitter gasoline wars. In 1935, Shell started a different tack with the adoption of a new, basic business philosophy. Volume would no longer be the primary measuring stick of performance in marketing; competitiveness, costs in line with those of the most favorably situated competitor, was to be the new rule. Implementation of the new concept was provided by the Salmon committee report, the first study of the Shell organization as an integrated oil company; no longer would managerial thinking be conditioned by hunches and guesswork. By 1940 the new program had resulted in a number of important physical changes, and in corporate structure, mergers in 1939 had made Shell one nation-wide operating company. During those same years, Shell and others in the industry had the additional problems of the Madison Case, the "Mother Hubbard" suit, T.N.E.C. hearings, and other federal entanglements.

There is another story that developed during the 1930's which Beaton submits at this point in his book, the story of Shell's venture in chemicals. As perhaps is clear by now, the author is not one to let a scientific process of any nature go unexplained in his text. Nowhere is his curiosity and discipline for unraveling the complex more evident than in this account of Shell's experiments and achievements in chemistry. It is an interesting story, not only because of the scientific progress made by the Shell Development and Shell Chemical companies, but because of the influences and problems encountered at The Hague and in the laboratories by the men who pioneered this great venture.

The final two periods of the book cover the war and postwar years. The war history, of course, is an account of the exciting co-operative and individual efforts of the oil companies to supply unprecedented quantities and types of oil products. Shell's accomplishments from twenty-five years of scientific research, much of it in advance of the industry, were vital contributions to that effort. In the ten years after World War II, Shell experienced the most substantial growth in its history. At the conclusion of *Enterprise in Oil* Shell ranks among the leaders in the oil industry and American industry.

In addition to his useful text, the author has supplied a number of statistical tables, listings of directors and corporate data, and a chronology covering 1890-1955. Those who may do research in related projects will find his citations of sources particularly valuable where he evaluates the many technical, economic, and reference books he has used.

In the final analysis, not every reader will agree with the emphasis the author has given some material in the history. At times his factual treatment is carried to the point of diminishing returns, and his chronological outline occasionally forces discussion of the same issues in different sections. At the same time, some students of business may wish for more material on administration and policy. But these are relative matters. Over all, Beaton has struck a good balance in writing a monumental book. Though *Enterprise in Oil* is a major contribution primarily to business history and the literature of the oil industry, its use and value will certainly extend beyond those fields.

Rockford, Illinois

ELIZABETH BRICKER CURRIER

* * *

Vision: A Saga of the Sky. By Harold Mansfield. New York, Duell, Sloan and Pearce, 1956. Pp. x + 389. \$5.00.

Mr. Mansfield's book is an interesting chronicle describing the growth of Boeing Airplane Company emerging from a gleam in William Boeing's eye as he followed an air race in California in 1910 to an industrial giant of the jet age. But according to Mr. Mansfield's disclaimer, "This book is not a company history in the accepted sense, though it is factual throughout, and as accurate a portrayal of happenings as humanly possible. . . . But it is not primarily a factual presentation. It is the story that I see in a forty-year period of astonishing progress in the air." Furthermore, the author concentrates on the engineering to the virtual exclusion of the manufacturing and other phases of the business.

As these limitations suggest, the book is not an analytical study of the business strategy and developmental policies of the firm. Periodic references are made to such crucial matters as company organization, financial expansion, competition, and labor policy, but no real insights into business decisions are provided. Although it is necessary to make allowances for a tendency to dramatize for effect, there is an impression of management by slogans or daydreams rather than by calculation.

This does not mean that no significant business judgments are reported. Certainly one of the most crucial strategy moves was the decision to concentrate on big planes. Since each extension of size, range, and speed required ever more insights, the concentration on big planes necessitated new and extended concepts of aircraft research, combining wind tunnel and flight testing as part of the design process. In a design competition in 1935, Boeing boldly submitted a four-engine model in competition with the two-engine offerings of Martin and Douglas. This plane was the Flying Fortress, whose role as the standard bomber during World War II is well known.

Another interesting chapter in the history of the company was the decision in 1928 to establish a transport subsidiary to operate between Seattle and Vancouver. This decision represented largely an effort to stimulate the production

and sale of commercial aircraft to reduce the virtually complete dependence on military business. This operation subsequently led to the successful bid on the initial Chicago-Seattle mail contract and the organization of Boeing Air Transport Company. The plane manufacturing and air transport companies soon became the nucleus of a holding company which embraced, in addition, engine and propeller manufacturing companies. Further transport company acquisitions eventually led in 1931 to the formation of United Air Lines within the holding company. Although the holding company was dissolved as a result of the Air Mail Act of 1934, the complementary promotional efforts of the manufacturing and operating companies doubtless stimulated air travel.

Probably the book's most interesting lessons in economic history are learned outside the company itself from revelations involving such matters as technological evolution, the role of the military, the character of the market, and the characteristic production problems of the industry. Much of the output is sold in a monopsonistic market, where the central problem is to satisfy the requirements of the single customer (the military), rather than to market an established product. Often the specifications imposed demands which appeared impossible of performance, but the challenge was generally met. In many cases the resulting forced-draft design advances were translated to commercial aircraft. The insatiable demands for technological advance have had other implications, creating production problems that are virtually unique. When a product is completed, the basic problem is not unit cost reduction, but further design changes to improve quality (such as range and speed). Confronted by the uncertainties associated with the constant pressures for technological advance, an established product and market is enjoyed at best only briefly. These pressures have contributed to a high degree of financial instability through the years; on many occasions the author has recorded that Boeing ended the year with a loss. In fact, the book might well be titled, "Perseverance" or "Crisis."

While not designed for the serious student of business history, this book does provide valuable insights regarding the growth and character of an important new industry.

Michigan State University

MERRILL J. ROBERTS

• • •

Anaconda: Life of Marcus Daly, The Copper King. By H. Minar Shoebotham. Harrisburg, Pennsylvania, The Stackpole Company, 1956. Pp. 217. \$4.50.

This book is a biography of Marcus Daly, a principal founder of The Anaconda Company (the major U. S. producer of copper since about 1885) and its president from 1882 until 1900. Although the book contains very little information on either the organization or the early operations of The Anaconda Company, Daly's career is fairly completely described.

Marcus Daly, immigrant from County Cavan, Ireland, landed at New York City in 1856, alone, at age 15. His assets consisted of a few dollars, the clothes on his back, a strong physique, native intelligence, and a consuming desire to acquire wealth. It appears that five years in the New World strengthened Daly's back (he was a stevedore on the New York docks) but added little to his purse save a grub stake for another voyage in search of the golden fleece.

The California gold rush that had beckoned to similar footloose and money-hungry adventurers since 1849 drew Daly to San Francisco and thence to placer mining in famed Calaveras County. Another five years passed with Daly alternating between paying jobs as a day laborer and independent placer mining in and about the mining camps of Calaveras and Grass Valley, California, and Virginia City, Nevada. At the latter site the young Irishman worked his way up from a water boy to foreman in the Comstock, a fabulously rich silver mine which gave Daly his first experience with deep shaft operations. Leaving the Comstock in 1869, he followed in the wake of new silver strikes at White Pine and, later, Mineral Hill, Nevada. By 1870 his command of underground mining operations had advanced to the point where he was made superintendent of the Emma silver mine at Mineral Hill. There Daly's ability to handle the rough and ready riffraff of the frontier mining camp, his firm grasp of contemporary mining technique, and his self-educated talent for correctly estimating the extent of the ore bodies which he was extracting, led to further promotions. According to the author, the Emma mine earned \$2,000,000 in the 18 months of Daly's superintendency, following which its owners, Messrs. Robert and Sharp Walker of Salt Lake City, sold it on Daly's advice. The Emma "played-out" shortly after this sale, leaving the new owners with a worthless property.

Such talents were so valued by the Walker brothers that they next placed Daly in charge of several other mining properties in the Nevada area. At the same time he continued independent prospecting and also directed operations at a small silver mine of his own.

Marriage to Margaret Evans, the daughter of a Welsh miner, came to Daly in 1872 and U. S. citizenship in 1874. But by all odds the opportunity that would prove dearest to his life objective came in 1876. In that year the Walker brothers purchased the Alice, an apparently second-rate silver mine located at Butte, Montana, on Daly's advice. During the next four years "Alice" was remarkably successful under his supervision, but to Daly, this success was secondary to his growing belief that deep inside the hill or "butte" into which the shafts of the Alice and other silver mines were slowly sinking lay a gigantic mass of copper ore. Following his belief, he sold his share of the Alice in 1880 for \$100,000 (a sum upon which he might have retired for life at the age of 34 years), withdrew from the Walker employ, and set about to make his fortune in copper.

Within a few months Daly acquired a share in another silver mine at Butte, the Anaconda, bought his partners out when the silver lode appeared waning, and then set about to explore the mine's potential as a producer of copper. With the backing of San Francisco investors, he pushed the Anaconda from 65 feet to 300 feet into the butte over the next two years, still operating the mine as a silver producer but actually seeking the elusive red metal. Finally, just past the 300-foot-level, the long-sought-for strike was made — a vein 5 feet wide which tested 30 per cent copper at a point where the silver vein being followed played out. Daly promptly closed the workings as though intending to abandon them. Pumps were stopped and removed (without them the shafts would soon fill with water and cave-ins would begin), orders for silver processing equipment were cancelled, and a well-nourished rumor spread that the Anaconda properties were considered "played-out" and worthless. At the same time, Daly's associates hastened from San Francisco, and plans

were made to capitalize on Daly's vision that the still secret copper strike proved the butte to be "the richest hill on earth." The backers were persuaded to Daly's view, and the group proceeded to purchase virtually the entire butte, secretly and at bargain prices.

Needless to say, Daly's predictions proved correct. With the necessity for secrecy past, his group moved rapidly. Within three years (1885), the Butte workings accounted for nearly half of the copper mined in the United States and Daly, still in his early 40's and only some 15 years removed from the status of a day laborer, was a multimillionaire.

Between 1885 and his death in 1900, Daly became Montana's most controversial citizen as well as one of its wealthiest. Though never a candidate, he became involved in the most bitter and unprincipled kind of political contests for both state and federal office. He lavished money on a single-handed attempt to put Montana on the map as a center of horse breeding and horse racing. He was accused of illegally denuding the forest lands of Montana, including federal reserves, to provide fuel for the huge copper smelters at Butte, a charge which appears to have been well founded. When it served his strategy in attempting to influence railroad freight rates or world copper prices, Daly shut down the Anaconda works for weeks or even months, throwing thousands out of work. The author finds much to admire in Daly as a man. This reviewer can offer nothing but condolences to Daly's adopted land.

As a biography the book is largely a disorganized and eulogistic patchwork of unidentified quotations (apparently based upon accounts in contemporary newspapers) and hypothetical conversations. No use of private or company correspondence or records appears to have been made. Objectivity, balance, and historical perspective are almost wholly lacking. Finally, Daly never becomes a complete or plausible human being, so that the book fails even as historical fiction.

As a history of either a businessman in action or an operating enterprise the book is equally deficient. The present Anaconda Company, a \$900 million corporation which is the successor to the organization founded by Daly *et al.* still is without a history. Perhaps the inadequacies of this book will stimulate its directors to give the firm the kind of history that an organization of its magnitude and importance deserves.

KENNETH H. MYERS

Northwestern University

* * *

Public Control of Economic Enterprise. By Harold Koontz and Richard W. Gable. New York, McGraw-Hill Book Company, 1956. Pp. 851. \$7.00.

The eddies of controversy have swirled about the need for and effects of the growing public control of economic enterprise in the United States. Eschewing polemics, Koontz and Gable trace the evolution of public control in detailed fashion. Although it is to some extent a revision of the *Government Control of Business*, published by Koontz in 1941, the volume under review is a much more comprehensive work. It includes abundant materials on the major developments of the intervening years since 1941, notably those relating to the maturing of public control of economic activities and the evolution of programs embracing the total economy.

"The word 'control,'" according to the authors, "has been interpreted to apply, in addition to specific regulation of business, to the intervention of government into economic affairs through aids and ownership and through broader fiscal monetary controls designed to influence the entire economy." (P. vii.) Thus, the volume conceives of the subject in broader terms than do the standard textbooks.

First tracing briefly the evolution of the problem and the constitutional and administrative framework which fostered the growth of public control, the authors then treat of the major areas of the economy that have experienced government aid, assistance, or regulation. They give special emphasis to transportation and public utilities, which are not only distinguished by the thorough-going nature of the control over them but also by their historical significance in serving both as a proving ground and a model to be followed when regulation was extended to other industries. Other major areas discussed include securities exchanges as well as other financial organizations, labor, and agriculture. The book also emphasizes the program of control to maintain competition. The principal departure in the work is the treatment and analysis of recent, comprehensive controls, some of them instituted in wartime, to stabilize the economy or to stimulate economic growth.

A product of sound scholarship and painstaking research, the volume provides a detailed description and analysis of the legislation of control and the concomitant problems that have beset both government administrators and business managers. It also offers sound suggestions that would be of assistance in coping with the complexities of regulation in the labyrinth of the American economy.

The authors refer to the dangers flowing from administrative regulation in fostering bureaucracy and weakening the decision-making capacity of the business managers. Disturbing are the self-generating tendencies of regulation and its snowballing effect. The business manager is distracted by the increasingly onerous demands of governmental regulation. The authors justly remark: (p. 180)

Observation of many regulated companies, particularly those in the railroad industry, sometimes leads one to the cynical conclusion that these companies are run for the purpose of meeting regulations and not to produce the best kind of service demanded at the lowest cost, and with the highest profits.

There is not sufficient emphasis, however, on the compelling necessity for governmental regulation in spite of its manifest drawbacks. Indeed, if there is any one serious gap in the book, it relates to the failure to analyze adequately the reasons for and the pressures resulting in the tremendous growth of governmental powers over private enterprise, especially in more recent years. The public interest is mentioned not a few times as an important consideration for passage of specific acts of regulatory legislation. This elusive concept of the public interest is never tracked down. Seldom is there specific reference to the activities of pressure groups which have boldly identified themselves with the public interest.

Ralph W. Hidy, in referring to a recent study of Arthur M. Johnson on American petroleum pipelines and public policy to 1906, points out that this book spotlights the role of intra-industry conflict in making for government

regulation. Hidy, however, cautions that "one motivating element is never adequate to explain any situation" and contends, for example, that the demand for regulation of railroads "was a product of conflicts between at least farmers, merchants, and cities on the one side and the carriers on the other, to name a few of the interests involved." Thus, intra-industry conflict, while it is significant, cannot be considered as the sole cause of the mushrooming of governmental regulation.¹

Be that as it may, there is strong evidence that these conflicts, whether intra- or interindustry in nature or cutting across industry lines, have hastened the advent and the proliferation of governmental regulation. Public control has been instrumental in helping to abate or eliminate abuses in competition and in management practices which have threatened chaos and dimmed the prospects of profitability in specific industries. In these respects, it has aided industry by increasing public confidence in and good will for the regulated. J. Owen Stalson, in his *Marketing Life Insurance*, notes this role of governmental regulation in life insurance. This experience is typical of industry in general. The authors of the volume under review devote little attention to these significant conflicts in interest.

On the whole, the work is clear, comprehensive in its coverage, and valuable for its analysis of the complex phenomenon that constitutes government regulation in the United States. Of larger scope than the standard textbooks in the field, it can serve a dual purpose as a research aid as well as a serviceable college text.

Bronx, New York

HARRIS PROSCHANSKY

¹ Ralph W. Hidy, *Business History Review*, vol. 30, no. 3 (Sept., 1956), pp. 337-38, in an article entitled "Some Implications of the Recent Literature on the History of the Petroleum Industry: A Review Article." The book referred to by Hidy is Arthur M. Johnson's *The Development of American Petroleum Pipelines: A Study in Private Enterprise and Public Policy, 1862-1906* (Ithaca, 1956).

• • •

The Beekmans of New York in Politics and Commerce 1647-1877. By Philip L. White. New York, the New-York Historical Society, 1956. Pp. xxi + 705. \$10.00.

The Beekman Mercantile Papers 1746-1799. Transcribed and edited by Philip L. White. New York, The New-York Historical Society, 1956. Three volumes (continuously paged). Pp. vi + 1485. \$25.00.

Perhaps more than any other colony, New York's history can be traced through that of its leading families, at least until the early nineteenth century. The Livingstons, Schuylers, Van Cortlands, Smiths, De Peysters, and De Lanceys, among others, have contributed notably to the colony and state which was their home. So, too, did the Beekmans. Beginning with the first member of the family to settle in New York in 1647, William, the Beekmans have played a variety of roles over the past three centuries. Although not as outstanding as some other families, yet they have left their mark.

Dr. White has categorized the activities of the family, selecting public serv-

ice, commerce, and philanthropy as the areas in which the Beekmans have made their most important contributions. For the first century, the members of the family accepted their responsibilities as political leaders. For the past century and a half, they have adhered to the role of philanthropists.

However, it is the period between these two developments, the time during which the Beekmans were primarily merchants, that is of present interest. The years covered by this section of Dr. White's volume, 1746 to 1799, were marked by the ending of the Anglo-French wars for empire, the internal crisis within the British empire, the outbreak of the Revolution, and the attempts to stabilize business affairs in the hectic post-Revolutionary period. Starting with Gerard G., and continuing with Dr. William and James, the author has attempted to analyze and explain the business conduct of three interesting figures. All of them were specialized merchants, engaging in one particular branch of commerce rather than in general trade.

Gerard G. Beekman marked out two specific fields for his endeavors — the flaxseed trade with Ireland and a commission business with his Rhode Island correspondents. Although these concerns dominated his activities, he also took advantage of speculative wartime conditions to engage in shipping, marine insurance, and governmental contracting. As he grew older, he limited himself more and more to commission business alone, thereby eliminating the need to risk his own capital, until he finally withdrew entirely from active commerce and turned instead to the pleasures of plover hunting on Long Island.

The second of the merchants examined by Dr. White, Dr. William Beekman, is of interest as an example of a man who utilized wartime conditions to the utmost. A successful importer of dry goods, he took advantage of the opportunities presented by war to profit from the Caribbean trade and from ownership of shares in merchant vessels and privateers. With the coming of peace, he diverted his energies and his capital back into their accustomed channels and once more became an importer of dry goods.

The final merchant, James Beekman, a son of Dr. William, differed somewhat from his father in his response to wartime opportunities. Whereas Dr. William had to go far afield for his profits, James was able to find them closer to home. The presence of British troops in New York until 1780 afforded him ample profits and a relatively simple means of sending remittances to his English correspondents.

However, James Beekman's career took a decided turn for the worse with the eruption of the imperial crisis in 1784. The new British regulations, stricter enforcement of the customs laws, and the imposition of nonimportation agreements played havoc with his business. Despite the deleterious economic effects upon his affairs of the radical policies in New York, James remained a strong supporter of that party. When the Revolution came, he was found on the side of the patriot cause.

In the post-Revolutionary years, James Beekman strove valiantly, but unsuccessfully, to establish new contacts, particularly with France. By 1792 or 1793, he realized the impossibility of continuing in the importation business and turned instead to the task of managing the extensive New York City property which had been accumulated by the family over the years. Thus his career marked a turning point in the family's fortunes — no longer was their livelihood derived from commerce; it now came from rental income.

The careers of these three men and the records they have left behind, Dr. White suggests, "provide very strong evidence on the nature of the commerce of the northern colonies in the three decades before the American Revolution." Using the Beekmans as typical examples, he asserts that there are important differences between the New York merchants of that period and their counterparts in New England. The former, he suggests, were specialists in trade, dealing with wholesalers of particular commodities or manufacturers, while their northern neighbors tended more toward general merchandising. The reasons assigned by Dr. White for this difference in technique are: the more adequate and stable currency available in New York, the more productive hinterland of the Hudson and Mohawk valleys, and the beneficial influence of the concentration of British military expenditures in the colony. The major disadvantage which he finds in this situation was that it lulled the Beekmans into a false sense of security — they failed to realize until after the Revolution that the days of the importer were numbered. Thus, they were forced to retire from active business, while the New Englanders, such as the Browns of Rhode Island who had diverted their funds over a period of time into manufacturing enterprises, were enabled to continue.

This is certainly a new thesis, but the present reviewers might wish that Dr. White had not been quite so forceful in stating it. In contradicting the accepted interpretation of Virginia D. Harrington's *The New York Merchant on The Eve of the Revolution* (New York, 1935), Dr. White has not marshalled sufficient evidence to make his challenge stand without criticism.

For one thing, Dr. White has only examined the careers of three members of the Beekman family, and he admits that there are gaps in the evidence which he has used. Perhaps, if studies of other merchants of this period substantiate his views, the challenge to Harrington's thesis of the techniques of mercantile activity will have more force.

Furthermore, these reviewers must record their feeling that Dr. White has perhaps failed to tap all possible sources in his examination of the Beekmans. For example, a great deal of attention is given to the various abortive endeavors in which Gerard G. Beekman tried his hand, while very little notice is given to his commission business with his Rhode Island correspondents or to the gathering of flaxseed in the colonies for shipment to Ireland. An almost exclusive reliance upon the Beekman family papers may possibly explain the lack of information concerning such things.

However, Dr. White has performed a noteworthy service, not only by stating his thesis so forthrightly and thereby calling attention to the need for further study in this area, but also by editing and publishing the three volumes of *The Beekman Mercantile Papers*. These are a rich source of documentary materials on business activity which have thus far been unequaled, especially for New York history.

Comprising "virtually all of the extant correspondence of three members of the Beekman family," the *Mercantile Papers* provide a view of the activities of Gerard G., James, and Gerard W. Beekman, the first two of whom are discussed in detail in the study. The papers of the third member of the group, Gerard W., are "familial rather than commercial letters."

Although the publication of these massive volumes of correspondence is in many respects an innovation in New York business history, one might wish that more traditional techniques had been used in editing them. In lieu of

footnotes, the reader must resort to the family study for elucidation of any unexplained point or person, finding the information by means of a very good index in that volume. Although it admittedly serves the purpose, it remains unhappily cumbersome. A glossary of eighteenth-century commercial terms and a genealogy have been appended to the study of the family as aids to the reader.

Dr. White has made an excellent beginning in gathering and editing the business papers of a prominent New York mercantile family. It is hoped that other such collections will soon be forthcoming, for it is on the basis of such papers that the early history of New York business should be written. Dr. White's summary chapters on the business operation of the Beekmans are neither conclusive nor are they always the result of comparative studies in the evolution of general policies and practices. Nevertheless, these chapters are sufficiently significant to warrant careful appraisal, suggesting the need for much further research. It is in this respect that Dr. White's study of the Beekmans makes its most valuable contribution.

Tarrytown, New York
New York University

LAWRENCE H. LEDER
VINCENT P. CAROSSO

• • •

The American Railroad Network, 1861-1890. By George Rogers Taylor and Irene D. Neu. Cambridge, Mass., Harvard University Press, 1956. Pp. viii + 113. \$3.75.

The American Railroad Network, 1861-1890, with an emphasis on gauge differences, provides answers to several questions which arose when authors George Rogers Taylor and Irene D. Neu first constructed a "more meaningful map" of pre-Civil War railways: why was there a lack of an integrated network prior to the outbreak of war and when, by what means, and why did railroad integration occur within the next thirty years?

By showing only roads in operation as opposed to roads projected, demonstrating gauge differences and lack of connections between railways, the "meaningful map" (actually three sectional maps located at the end of the book) indicates a lack of physical integration as of April 1, 1861. This new map was made possible by resorting primarily to railroad guides and scholarly regional and company railroad histories rather than depending on maps actually dated 1860 which might mislead a reader accustomed to the reading of maps dated 1900 or later into assuming there was through movement of internal trade.

As to the lack of an integrated system, the answer emerges that railroads had been designed to serve the exclusive needs of the great market cities (p. 83). In a sectional analysis of the 1861 situation, the New England section comes off best in railway integration. With the exception of Maine which was identifying itself more with the northern British provinces than with her neighboring states, this section was "relatively free from gaps or obstructions at points of intersectional connection" (p. 16) and the gauge of its roads was usually standard. The authors contend that the Canadian system adopted the 5-foot 6-inch gauge rather than the standard one because of Portland's influence; no documentary confirmation of the theory that the Canadian government adopted the broad gauge as a defense measure against the possibility of United States in-

vasion was found by the authors (p. 21). And it was not until 1880 that practically all Canadian roads had shifted back to the standard gauge (p. 77).

Middle Atlantic States were not integrated railwaywise primarily due to the merchants of New York, Philadelphia, and Baltimore seeking the establishment of railroad empires. The uniformity of the midwestern states' network, particularly in Ohio, was badly marred by differences in gauge. The South adhered to the 5-foot width but nevertheless suffered by serious gauge variation within states. Also important was the fact that there were serious gaps in the railroad network within the cities of the South, Richmond serving as an outstanding example. It was in 1886 that the South "joined the union" by accepting the standard gauge; that is, a gauge of 4 feet 9 inches rather than 4 feet 8 and one-half inches due to the pressure of the interchange business with the Pennsylvania Railroad system (p. 81).

The heavy tax on through freight as a result of traffic breaks and the technological, institutional innovations of the Civil War era are considered as factors encouraging railway integration within the next thirty years. The fact that the first transcontinental railroad gauge was determined by Congress at 4 feet 8 and one-half inches did not force conformity upon all roads; Congress so determined this measurement because it already predominated in the country (p. 55).

As a momentary aid in keeping down the costs of providing a standard gauge in the interest of railway integration, the authors note three novel expedients: the "compromise car" with wheels of 5-inch surfaces which permitted the car to run over tracks from 4 feet 8 and one-half inches to 4 feet 10 inches; cars having wheels designed to slide on their axles for even broader gauge; and car hoists or "elevating machines" designed to lift the bodies of cars while trucks of one gauge were exchanged for another without the necessity of unloading the freight. In 1880 less than 3 per cent of the roads accomplished the switch to standard gauge by using a third rail (p. 77).

As to the final contrast between the 1861 and 1890 railway picture: by 1890 the trackage breaks at rivers and in cities were eliminated, the rivers had been bridged or ferries introduced, and only a small percentage of the roads had adopted other than the standard gauge. The development of fast freight lines (an entire chapter is devoted to this problem), the adoption of standard time belts, the issue of through tickets and other institutional advances had helped to produce an integrated system.

This discussion of the physical integration of American railroads between the years 1861 and 1890 is brief but nevertheless well stated and important.

WILLIAM T. DOHERTY, JR.

The University of Mississippi

• • •

Rochester—The Quest for Quality, 1890-1925. By Blake McKelvey. Cambridge, Mass., Harvard University Press, 1956. Pp. 432. \$6.00.

Big histories make big news. The chronicler of a civilization, of a nation, of a state, paints with a broad brush—deals with necessarily general forces.

But general histories, to be realistic, require construction from particular

histories. Particular histories are the forte of the business historian and the municipal specialist. This book is eminently a product of the latter.

It is the third volume in the chronological history of Rochester, New York, written by its official city historian, Blake McKelvey. It covers the years 1890-1925. (Volume I: *Rochester — The Water-Power City, 1812-1854*; Volume II: *Rochester — The Flower City, 1855-1890*.)

To portray adequately the life and times of a city, the municipal historian must balance political and civic analysis, economic interpretation and social and cultural understanding. These needs underline this book's strengths. And they also point up its weaknesses.

The 1890's in Rochester opened on a note of self-conscious confidence; this was soon shattered by the depression of 1893 and its concurrent civic and social tensions. After the turn of the century political reforms and economic growth eased many of these tensions, left room for a religious and cultural growth that would make any city proud. This economic growth took the form of concerted emphasis on quality products, and on stability rather than rapid expansion. The post-World War I period found renewed civic reforms and a rededication to conservative business practices. The entire sweep of this critical generation is spread before the reader's eyes; Rochester comes alive as an on-going totality.

The author is intensely interested in civic reform; the analytical discussion of Rochester's ills and the movement to the city manager system in 1925 is excellent. The social and cultural framework is tipped rather heavily toward the descriptive, but a strong sense of the intensity of Rochester civic pride and civic responsibility is felt.

The author's treatment of Rochester's labor movement is quite comprehensive. The dying breaths of the Knights of Labor in their ill-advised boycott of 1890, the tortuous rise of the clothing workers' unions, the I.W.W. scares of post-World War I all become vivid through the actions of specific people in a specific situation.

The history of Rochester's business firms is interesting but a bit less well done. In part this seems a result of lack of opportunity to dig deeply into corporate records; this is almost an inherent difficulty of an effort as broad-based as this. But the lack is, nevertheless, there. For example, the internal history of the Eastman-Kodak Company is only briefly considered — the author has concentrated primarily on market and patent growth of the firm. The reader is told of some of the idiosyncrasies of George Eastman, but their implications to the company and to the town are not explored at any length. And throughout the sections on business analysis there appears a singular preoccupation with the outward manifestations of monopoly action — a seeming judgment that "the more competition, the better." Perhaps this would have been more valid in the earlier years, when Rochester was dealing with difficult problems in utility franchises, than in later years. This would have been interesting material for further exploration.

The author uses no footnotes and quotes directly only in quite infrequent instances. This puts a heavy drain on descriptive ability; in some cases first-hand quotations might have given added impact. A comprehensive bibliography is, however, included as an appendix; perhaps a more direct tie with the text would help historians interested in digging deeper.

But these are, on balance, narrow criticisms. The bigger story is the fact that the author has successfully attempted a wide-ranging appraisal of an

entire town's life. This approach should be of great use to the business historian — inevitably a firm's business life is inextricably linked with the town's political, social, and economic life. The possibilities for cross-fertilization here appear enormous.

The Amos Tuck School, Dartmouth College

WAYNE G. BROEHL, JR.

* * *

Henry Varnum Poor, Business Editor, Analyst, and Reformer. By Alfred D. Chandler, Jr. Cambridge, Mass., Harvard University Press, 1956. Pp. 362. \$6.50.

For few periods in American economic history is the literature so rich as for the decades preceding the Civil War. To older histories of different subjects by Seymour Dunbar, Cleveland and Powell, Samuel E. Morison, Robert G. Albion, Wheaton J. Lanex, Caroline Ware, A. H. Cole, and Paul Gates — to mention but a few — have been added in recent years definitive works on the period in general by George R. Taylor, on steamboating by Louis C. Hunter, on banking by Fritz Redlich, Walter B. Smith, and Bray Hammond, on railroading by Edward C. Kirkland, on retailing by Lewis E. Atherton, on economic thought by Joseph Dorfman, and on the relations of business and government by Louis Hartz, Oscar Handlin, and Carter Goodrich. To this literature this first book by Alfred D. Chandler, Jr., is an appropriate and welcome addition. Henry Varnum Poor lived nearly a hundred years, from 1812 to 1905, but there is no question in Mr. Chandler's mind and there need be none in ours that his great period was that from 1849 to 1861, when he was editor of the *American Railroad Journal*.

Despite its title, this book is scarcely a biography. Poor, personally, is dealt with hardly anywhere but in parts of the opening chapter. Elsewhere, Chandler makes an occasional brave effort to remind us of the relationship of Poor's background, education, family, and friends, to the tenor of his thinking as expressed, especially, in the strong editorials he wrote for his business magazine. But it is the relationship of this magazine itself to the railroad and banking history of the period of Poor's editorship that lies at the core of Chandler's work and gives it its value.

Poor assumed the direction of the *American Railroad Journal* in its seventeenth year, in 1849. This was just on the threshold of the great railroad building boom of the 1850's, especially in the West. Before that, most American railroads had been laid in the older seaboard states, north and south; the greatest concentration of railroads was in Massachusetts, the greatest center of railroad finance was Boston, the greatest medium of railroad capitalization was common stock which was sold by Boston promoters largely to or through their friends. The 1850's saw the development of railroad companies far larger than any in the earlier decades, the rise of Ohio and Illinois as the leading railroad states, the development of the first mortgage bond as the main magnet for railroad funds, and the emergence of investment banking in Wall Street and of foreign investors on the continent and in Great Britain as the main props of railroad finance. No one was more responsive to this changing railroad picture than Henry Varnum Poor.

Western railroad development was different in almost every respect from that in the older sections of the country, and Poor's brilliantly flexible journalistic policies were adapted especially to the changing needs of the western roads. At first he concentrated on the novel problems of engineering and construction; next he focussed on crucial questions of large-scale finance in capital-poor areas; later on he stressed the problems of railroad operation; ultimately he wrote most on the challenge to management offered by huge, geographically dispersed enterprises characterized most profoundly by the separation of ownership and control.

Poor was better educated than the other business journalists of his day, he had more business experience, associated more closely with leading businessmen, especially financiers, but also enjoyed far more than his competitors the friendship of leading thinkers in other fields such as philosophy, religion, literature, and science. Poor was a railroad enthusiast, but he was also a conservative who took every occasion to remind railroad promoters sunk in self-interest of the interests of shippers, investors, communities, the public at large, and the nation itself in railroad development. His medium was the *American Railroad Journal*. The *Journal* was an unequalled business paper, comprehensive in coverage, reliable in technical matters, abreast of the latest innovations in relevant fields. But it also had a pronounced reformist bent which its editor had no wish to suppress. One of the strengths of Chandler's narrative is his grasp of Poor's day-by-day contributions to a rapidly changing industry; a second is Chandler's constant awareness of some of the blind spots in Poor's own thinking, especially where his moral blinkers kept him from seeing the naked force of amoral institutional pressures — notably those arising out of the strikingly new problem of heavy overhead costs and their relationship to unused capacity and competition.

In writing of Poor, who had an acute grasp of the nuances of practical business life, Chandler himself makes a number of useful and illuminating distinctions, such as those between the problems of western and southern railroads, between the attitudes of English and German investors, between the roles of security brokers and fiscal agents, between the thinking of New York and New England capitalists, and between the issues of different years such as 1849 and 1852, or 1854 and 1857. With a firm grasp of long-term trends and their meaning for economic history, Chandler (like Poor) is also enlightening on very short-term changes and the responsiveness of businessmen to them.

This is an able, scholarly work, which aside from implications for economic theory, is valuable for its substantive contribution to the fields of railroad and investment-banking history. On the latter, in particular, it adds considerably to our information and clarifies many points.

Ridgefield, Connecticut

WILLIAM MILLER



PUBLICATIONS NOTE

Two new journals of interest to business historians have recently made their appearance. In May, 1956, the first number of the *Bulletin of the Business Archives Council of Australia* was issued. Sir Norman Nock, president of the Business Archives Council, states in the foreword:

This is the first number of the "Bulletin" which the Council hopes to publish twice a year. Its aim is to further that rapprochement between the academic and the businessman, by giving news of the Council's activities, plans for further development and of research in business history. The "Bulletin" will provide an opportunity for the discussion of problems mutual to the company executive and to the scholar arising from the preservation of business records and the study of the history of business.

The Council believes that the world of practical affairs — such as agriculture, industry and commerce — is not divided by a chasm from the universities: the executive and the economist, the secretary and the historian share a common ground of interest and can help each other in bringing enlightenment to the discussion of economic problems. The articles in this "Bulletin" will attempt to bring about that fruitful co-operation.

The Table of Contents of this first *Bulletin* lists the following articles:

- The History of David Jones Ltd., by Sir Charles Lloyd-Jones.
- A Note on Archives in New Zealand, by Marjorie G. Jacobs.
- The Classification and Description of Business Records, by David S. Macmillan.
- The History of Unilever: a Review Article, by Alan Birch.

There follows a book review section, notes on the activities of the Business Archives Council, and a Publications Received section. The announcement is also made of appearance of the first of what is hoped will be a series of publications relating to business archives and history. This comprises a sixteen-page booklet entitled "Business Archives," written by Alan Birch, Lecturer in Economic History, Sydney University, and David S. Macmillan, Archivist, Sydney University.

In November, 1956, the second *Bulletin* was published. This issue contained the following articles:

- Notes on the History of the Royal Exchange of Sydney, by W. J. Lyons.
- The Development of an Archival Programme within the Commonwealth Bank, by T. E. Sparrow.
- Writing a Company History, by Alan Birch.
- Western Australian Business Records, by F. K. Crowley.
- Modern Archives: a Review Article, by David S. Macmillan.

Information about the Council and its activities may be obtained from Dr. Alan Birch, Secretary, Business Archives Council of Australia, N. S. W. Branch, Department of Economics, The University, Sydney, Australia.

In September, 1956, was published the first issue of *Tradition*, a German quarterly magazine devoted to business history. This issue contains the following articles:

An Account of Business History and Entrepreneurial Biography, by Wilhelm Treue.

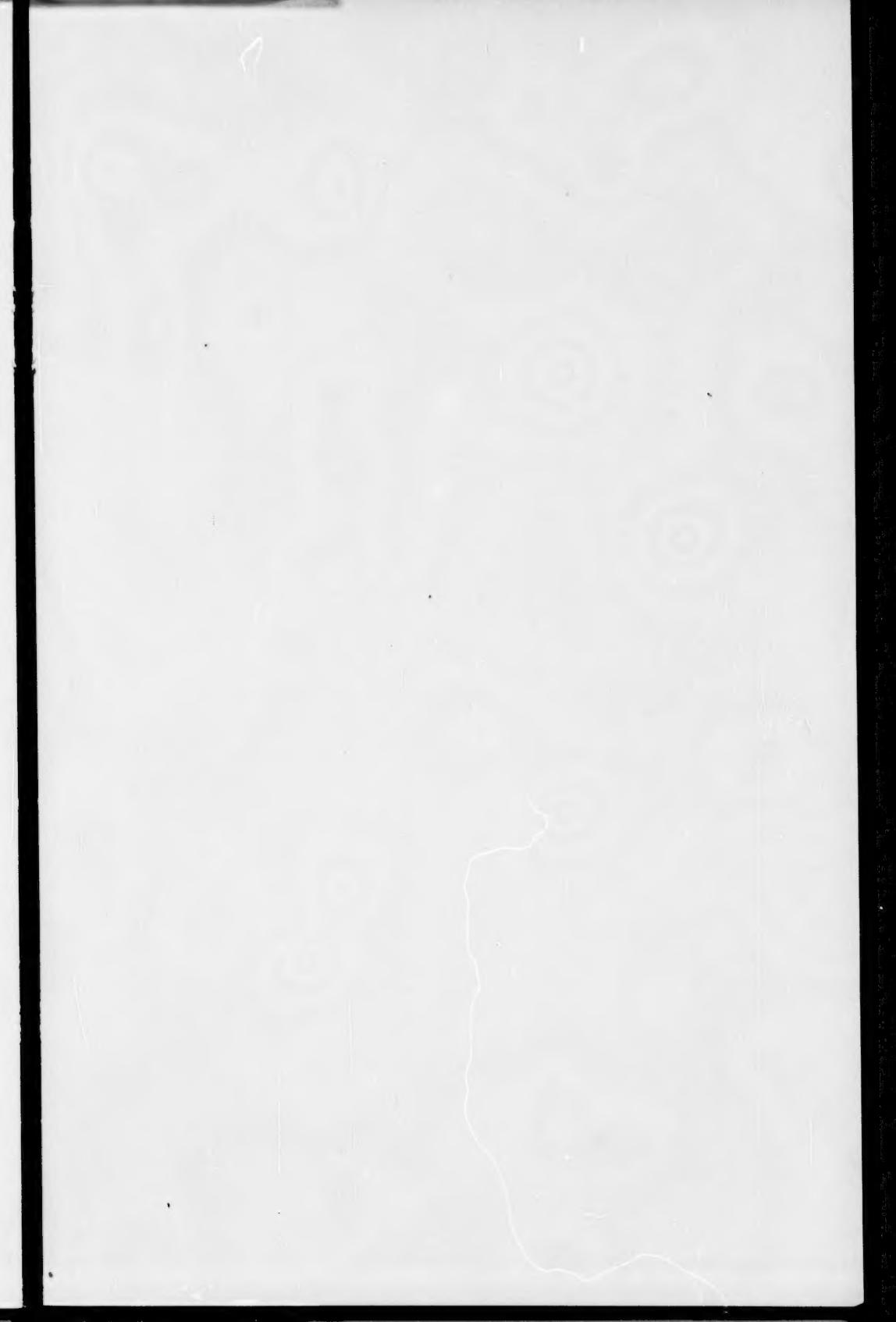
Carol von Siemens (1829-1906), a German Entrepreneur in Russia and England, by Sigfrid von Weiher.

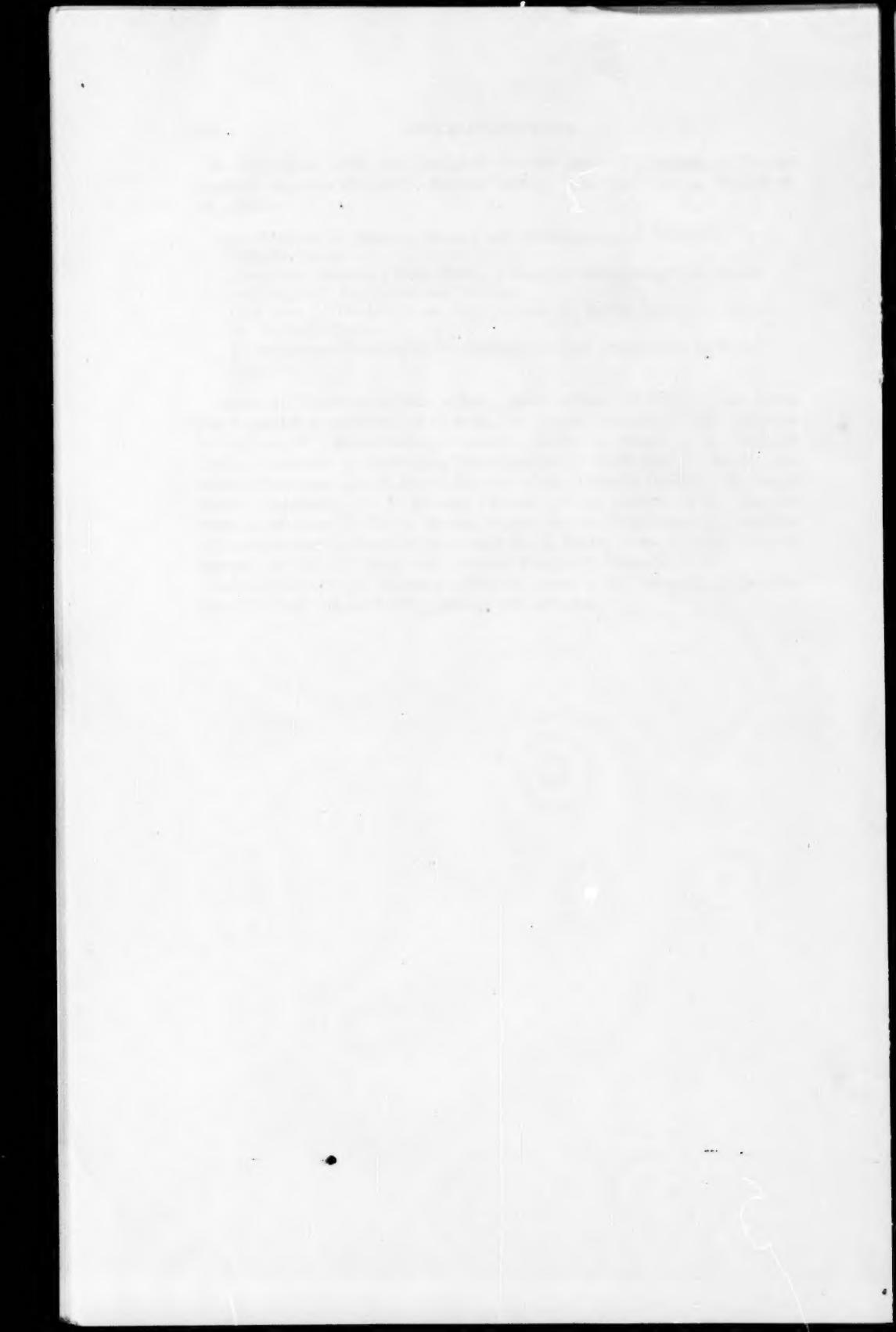
Carl Mez (1808-1877), an Entrepreneur of Baden-Baden in 1900, by Wolfram Fischer.

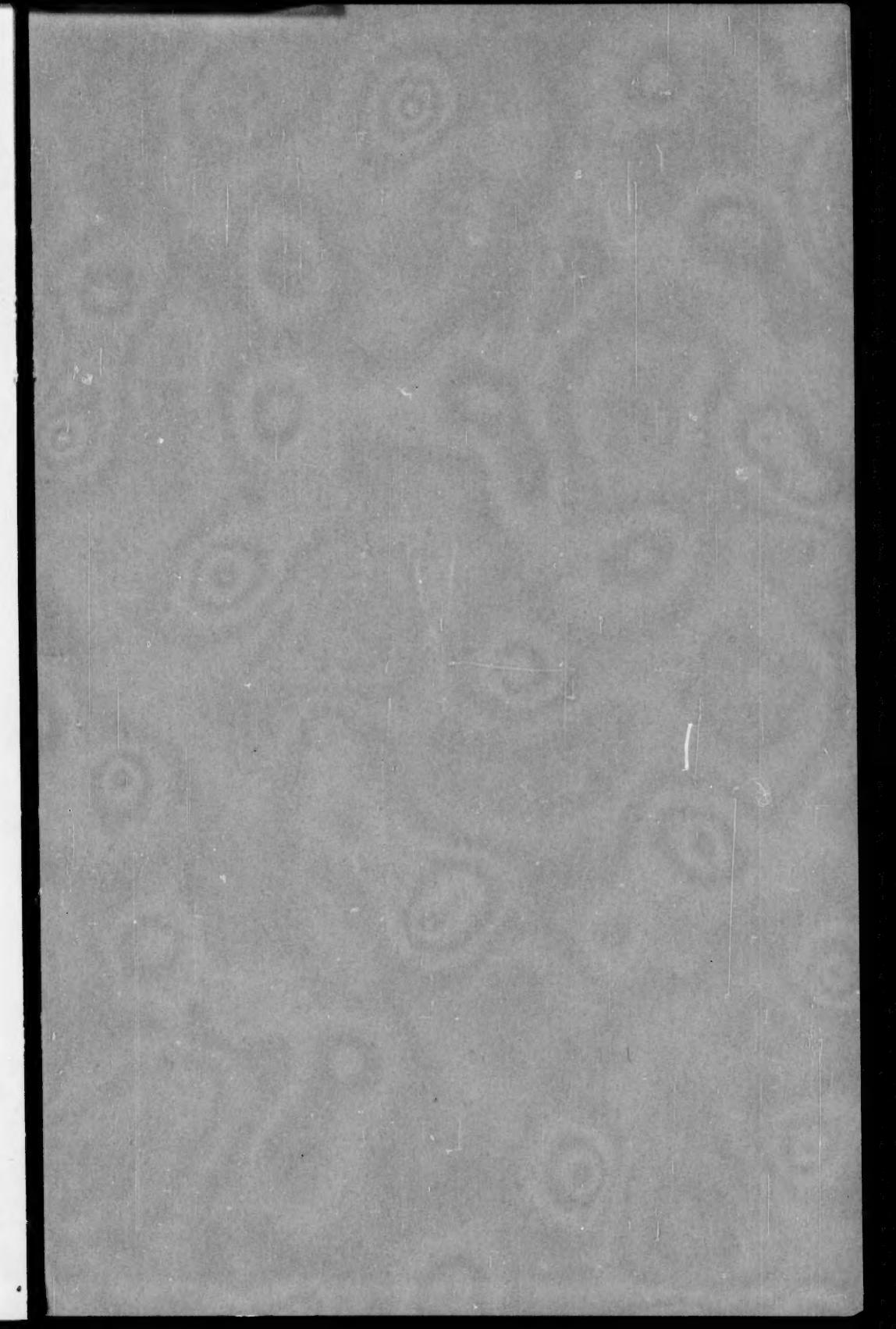
Alfred Krupp's General Policy, introduction and commentary by Ernst Schröder.

Format of *Tradition* includes a book digest section and foreign news notes. The magazine is published in German, by August Lutzeyer GmbH, Lichten-taler Strasse 61, Baden-Baden, Germany. Editor in charge is Dr. Wilhelm Treue, University of Göttingen, Schildgraben 3, Göttingen, Germany. Assistant editors are: Dr. E. Hieke, Director of the Research Center of Economic History, Hamburg; Dr. F. Klemm, Director of the Library of the German Museum, Munich; Dr. P. H. Mertes, Deputy to the Chief Manager, Chamber of Commerce and Industry of Dortmund; Dr. K. Prüser, State Archives Director, Bremen; and Dr. W. Zorn, New German Biography, Munich.

Subscription rate for *Tradition* is DM 24 (about \$6.00) annually; single issue price DM 6.50 (about \$1.60), postage not included.







The Business History Review

A quarterly journal specializing in the history of business

Development of administrative methods

Roles of management and labor in industrial expansion

*Growth of business functions,
such as marketing and investment banking*

Relation of business attitudes and actions to social change

Biographies of leading businessmen

Histories of important business firms

For further information write to THE BUSINESS HISTORY REVIEW, 217 Baker Library; Soldiers Field; Boston 63, Massachusetts.